

APPENDIX B

ARARs

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APPENDIX B

EVALUATION OF POTENTIALLY RELEVANT AND APPROPRIATE REQUIREMENTS

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 was passed by Congress and signed into law on December 11, 1980 (Public Law 96-510). This act was intended to provide for "liability, compensation, cleanup, and emergency response for hazardous substances released into the environment and the cleanup of inactive waste disposal sites." The Superfund Amendments and Reauthorization Act (SARA), adopted on October 17, 1986 (Public Law 99-499), did not substantially alter the original structure of CERCLA but provided extensive amendments to it.

In particular, §121 of CERCLA specifies that remedial actions for cleanup of hazardous substances must comply with requirements or standards under federal or more stringent state environmental laws that are applicable or relevant and appropriate to the hazardous substances or particular circumstances at a site. Inherent in the interpretation of applicable or relevant and appropriate requirements (ARARs) is the assumption that protection of human health and the environment is ensured. Although the action at the Colonie site falls under removal actions, regulations governing remedial actions may be relevant and appropriate.

The purpose of this appendix is to supply a preliminary list of available federal and state chemical-, location-, and action-specific ARARs that might be considered for removal actions taken at the Colonie site. Removal action alternatives for the site have been developed and four sitewide alternatives are described in Chapter 3. The first alternative is a no action alternative; the remaining three sitewide alternatives are made up of a variety of component parts, including institutional controls, containment, removal, and disposal.

Pursuant to the Secretarial Policy on the National Environmental Policy Act, June 1994, DOE will rely on the CERCLA process for review of actions taken under CERCLA and will incorporate NEPA values to ensure environmental protection controls and opportunities for public involvement are incorporated early in the decision making process.

Similarly, DOE addresses occupational safety in DOE Orders 5480.11 (*Radiation Protection for Occupational Workers*), 5480.4 (*Environmental Protection, Safety, and Health Protection Standards*), 5483.1A [*Occupational Safety and Health Program for Contractors at Government Owned Contractor Operated (GOCO) Facilities*], 5480.9 (*Construction Safety and Health Program*), and 5480.10 (*Contractor Industrial Hygiene Program*). The U.S. Environmental Protection Agency (EPA) requires compliance with the OSHA standards in §300.150 of the National Oil and Hazardous Substance Contingency Plan (NCP). Therefore, regulations promulgated by OSHA and the DOE Orders related to occupational safety are addressed as ARARs.

The following is a listing of the definitions of terms used throughout this report:

Applicable requirements are "those cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under federal environmental or state environmental or facility siting law that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a CERCLA site" (40 CFR 300.5).

Relevant and appropriate requirements are "those cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under federal environmental or state environmental or facility siting law that, while not applicable to a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a CERCLA site, address problems or situations sufficiently similar to those encountered at the CERCLA site that their use is well suited to the particular site" (40 CFR 300.5).

Requirements under federal or state law may be *either* applicable *or* relevant and appropriate to CERCLA cleanup actions, but not both. However, requirements must be *both* relevant *and* appropriate for compliance to be necessary. In the case where a federal and a state ARAR are available, or where there are two potential ARARs addressing the same issue, the more stringent regulation must be selected. However, CERCLA §121(d)(4) provides several ARAR waiver options that may be invoked, providing that the basic premise of protection of human health and the environment is not ignored. A waiver is available for state standards that have not been applied uniformly in similar circumstances across the state. In addition, CERCLA §121(d)(2)(C) forbids state standards that effectively prohibit land disposal of hazardous substances.

To be considered (TBC) material are non-promulgated advisories or guidance issued by Federal or State government that are not legally binding and do not have the status of potential ARARs [CERCLA COMPLIANCE with Other Laws Manual (Draft Guidance), EPA/540/G-89/006, August 1988].

CERCLA onsite cleanup actions must only comply with the substantive requirements of a regulation and not the administrative requirements to obtain federal, state, or local permits [CERCLA §121(e) and FFA §XXII]. To ensure that CERCLA response actions proceed as rapidly as possible, EPA has reaffirmed this position in the final NCP (55 FR 8756, March 8, 1990). Substantive requirements pertain directly to the actions or conditions at a site, while administrative requirements facilitate their implementation. EPA recognizes that certain of the administrative requirements such as consultation with state agencies, reporting, etc., are accomplished through the state involvement and public participation requirements of the NCP. These administrative requirements should be observed if they are useful in determining cleanup standards at the site (55 FR 8757).

CERCLA defines "onsite" to mean "the areal extent of contamination and all suitable areas in very close proximity" (40 CFR 300.5). Therefore, for this ARAR summary, all removal actions performed at Colonie are assumed to be onsite actions which do not require permitting.

CHEMICAL-SPECIFIC ARARS

Chemical-specific requirements set health or risk-based concentration limits or discharge limitations in various environmental media for specific hazardous substances, pollutants, or contaminants" (53 FR 51437). These requirements generally set protective cleanup levels for the chemicals of concern in the designated media or else indicate a safe level of discharge that may be incorporated when considering a specific cleanup activity.

Over the years, releases from past operations have resulted in the presence of radioactive and chemical substances at the site. Industrial process wastes were generated at the site. Some of the soils tested have proven to be RCRA-characteristic wastes (based on Toxicity Characteristic Leaching Procedure (TCLP) tests). Constituents of concern (COCs) for human health identified for soils are copper, cadmium, lead, thallium, U-238, and Th-232; potential for soils to be impacted with volatile organics including TCE, PCE, and 1,2-DCE exists due to the presence of well defined soil gas plumes identified from the soil gas survey. The COCs for the groundwater are TCE, PCE, 1,2-DCE, chromium, nickel, barium, antimony, lead, and uranium.

Soil

Chemical-specific ARARs for cleanup of soils at the Colonie site are discussed in Chapter 2.

Groundwater/Surface Water

Chemical-specific limits applicable to treatment of water from excavation activities and surface water are listed in Chapter 2. However, the New York State Pollutant Discharge Elimination System (NYSPDES) limits which are in effect prior to cleanup of the site will also be applicable to discharge of treated water.

RADIATION PROTECTION STANDARDS

Very few applicable standards are available for the cleanup of radioactive sites. The Atomic Energy Act (AEA) of 1954 and its amendments delegated authority for control of nuclear energy to DOE, the U.S. Nuclear Regulatory Commission (NRC), and EPA.

DOE is authorized to control all types of nuclear materials at sites under its jurisdiction and is exempt from the NRC licensing and regulatory requirements. Therefore, NRC regulations are not generally considered to be applicable for CERCLA cleanup at DOE facilities. The DOE regulations for handling and cleanup of radioactive materials are outlined in a series

of internal DOE Orders and are functionally equivalent to the NRC requirements, and include all "appropriate" requirements from the NRC regulations. DOE Orders will be treated as TBC guidance, applicable or relevant and appropriate. Sections of the NRC regulations may be relevant and appropriate or TBC in situations where the DOE Orders do not adequately address a specific situation at a site.

EPA Regulations

EPA's Office of Radiation and Indoor Air (ORIA) is preparing a proposed rule (at 40 CFR 196) on radiation site cleanup levels, including radionuclide cleanup levels for soil. The proposed rule is expected to be released for public review and comment in 1995, with a final rule anticipated in 1996 (personal communication between Dr. Anthony Wolbarst, EPA ORIA and Julia Gartseff, SAIC, February 1, 1995). The agency has drafted two documents in support of the proposed rule: *Radiation Site Cleanup Regulations: Technical Support Document for the Development of Radionuclide Cleanup Levels for Soil* (Review Draft, 9/94), and *Radiation Site Cleanup Regulations: Technical Support Document for the Development of Radionuclide Cleanup Levels for Soil, Appendices* (9/94) (60 FR 2386, 1/9/95). When adopted, the final rule will be applicable to remedial actions at the Colonie site.

Subpart H of 40 CFR 61 addresses atmospheric radionuclide emissions from DOE facilities and may be applicable to airborne emissions during remedial activities. EPA has issued a final National Emissions Standards for Hazardous Air Pollution (NESHAP) rule (54 FR 51654, December 15, 1989) that limits emissions of radionuclides to the ambient air from DOE facilities to amounts that would not cause any member of the public to receive an effective dose equivalent of 10 mrem/year (40 CFR 61.92).

DOE Orders

Radiation exposure limits for the general public defined in DOE Order 5400.5 (*Radiation Protection of the Public and the Environment*, February 8, 1990) are: an effective dose equivalent of 100 mrem/year from all exposure pathways and all DOE sources of radiation and a dose of less than 500 mrem/year as a temporary maximum exemption under specially permitted and DOE-approved circumstances. The overriding principle of the DOE Order is that all releases of radioactive material shall be "as low as reasonably achievable" (ALARA). Doses to individuals using property released to the public must be well below the primary dose limits and the ALARA process must be applied no matter how small the dose.

DOE Order 5400.5, Chap. II, lists Derived Concentration Guides (DCGs) for radionuclide isotopes which are based on a committed effective dose equivalent of 100 mrem/yr for ingestion of air or water. For liquid wastes containing radionuclides which are discharged to surface waters, the best available technology (BAT) must be used if the receiving water, at the point of discharge, would receive radioactive material at a concentration greater than the DCG. Guidelines for selecting the BAT are given. Implementation of the BAT process is not required if annual releases to surface water are below the DCG. In the case of releases of

multiple radionuclides, the sum of the fractional DCGs must not exceed unity. In addition, effluent releases to surface water must not result in exposures to aquatic organisms which exceed an absorbed dose of 1 rad/day.

DOE Order 5400.5, Chap. IV, presents guidelines for cleanup of residual radioactive material, and management of sites with residual radioactivity above the specified guidelines. Basic dose limits and guidelines for residual radioactivity are given in the Order, as well as criteria for interim storage and interim and long-term management of properties where residual radioactivity is left in place above the guidelines. Supplemental limits and exceptions may be established for a site as described in Chap. IV.7. An exception may be made in instances where residual radioactive material is inaccessible, such as under hard-surfaced public roads and sidewalks, around public sewer lines, or in fence post foundations. Information on application of the guidelines and requirements presented in the order, including procedures for deriving specific property guidelines for allowable levels of residual radioactive material from basic dose limits (i.e., the RESRAD model), is contained in DOE/CH 8901, "A Manual for Implementing Residual Radioactive Material Guidelines, A Supplement to the U.S. Department of Energy Guidelines for Residual Radioactive Material at FUSRAP and SFMP Sites," June 1989 [5400.5(I-V.2)]. In these situations, administrative controls with an effective life of 25 years are required for interim management.

Although DOE Order 5400.5 specifies use of the RESRAD model to estimate concentrations in soils that will achieve the dose limits for residual radioactivity, the NRC criteria of 30 pCi/g for unrestricted disposal of slightly enriched uranium is often used as a standard for unrestricted use. For the Colonie site, a site-specific standard of 35 pCi/g U-238 has been proposed.

DOE has proposed the radiation protection standards for the public and the environment of DOE Order 5400.5 for codification at 10 CFR 834 (58 FR 16268, March 25, 1993). A final rule is expected in 1995 (Houlberg et al. 1994). When final, these standards will be legally applicable for cleanup at DOE sites.

DOE Order 5820.2A (*Radioactive Waste Management*, September 9, 1988) states that the management of low-level radioactive waste must assure that external exposure to the waste and concentrations of radioactive material that may be released into surface water and soil does not exceed 25 mrem/year to any member of the public. Releases to the atmosphere shall not exceed 10 mrem/year. Reasonable effort should be made to maintain releases to the environment to ALARA levels. The order pertains to the management of radioactive waste; the requirements in this Order will be TBC for disposal of soils or treatment residuals containing low-level waste (LLW).

LOCATION-SPECIFIC ARARs

Location-specific requirements "set restrictions upon the concentration of hazardous substances or the conduct of activities solely because they are in special locations"

(53 FR 51394). Appendix Table B-1 lists the major federal location-specific ARARs that might be pertinent to removal actions at Colonie.

Floodplains/Wetlands

If any alternatives are selected which would impact floodplains, the requirements found in Executive Order 11988, 40 CFR 6.302(b), 40 CFR 6, and 10 CFR 1022 would provide applicable. If wetlands are affected, consideration should be given to Executive Order 11990, 40 CFR 6.302(a), 40 CFR 6, 10 CFR 1022, Clean Water Act (CWA) §404, 40 CFR 230, and 33 CFR 320-330 for applicable requirements.

Historic Sites and Archaeological Findings

Although the potential is low, if any action is taken which would cause irreparable harm, loss, or destruction to any historic or archaeological site, the provisions of the Archaeological Resources Recovery Act (16 United States Code (USC) 470aa-II), 43 CFR 7, the Archaeological and Historic Preservation Act (16 USC 469a-c) and 40 CFR 6.301, as well as Executive Order 11593, 40 CFR 6.301 and 36 CFR 800 *et seq.* may be applicable.

Rare, Threatened, or Endangered Species

If a site investigation reveals the presence of any rare, threatened, or endangered animals or plants, or designated critical habitats at Colonie, the Endangered Species Act of 1991, as amended would be applicable.

ACTION-SPECIFIC ARARs

Performance, design, or other action-specific requirements set controls or restrictions on particular kinds of activities related to the management of hazardous waste (52 FR 32496). Selection of a particular remedial action at a site will invoke the appropriate action-specific ARARs that may specify particular performance standards or technologies, as well as specific environmental levels for discharged or residual chemicals.

A complete description of each of the alternatives is found in Chapter 3 of this report. The activities involved with each alternative are discussed briefly below. New York State regulations governing waste management, emissions, etc., are included in Appendix Table B-1.

EPA has established two new sections in RCRA Subpart S (*Corrective Action for Solid Waste Management Units*): 40 CFR 264.552 [Corrective Action Management Units (CAMUs)] and 40 CFR 264.553 [Temporary Units (TUs)] (58 FR 8658, February 16, 1993). Both of these units function solely to manage wastes that are generated at a RCRA facility for the purpose of implementing remedial actions (i.e., remediation wastes). The substantive requirements of this rule are expected to be ARARs for remediation of CERCLA sites that involve the management

of RCRA hazardous waste. In this context, CAMU designations would be incorporated into CERCLA decision documents (58 FR 8679).

Designation of a CAMU by the EPA Regional Administrator is a lengthy process, involving evaluation of seven decision criteria, public review and comment, and either RCRA permit modification or designation in a CERCLA decision document. A CAMU has not been considered as one of the options due to the presence of high volume disperse waste at the Colonie site.

No Action Alternative

There are no action-specific ARARs for the "no action" alternative. However, leaving the waste in place may violate certain DOE Orders for protection of the public from all sources of radiation. In addition, the NYSPDES policy is to protect waters of the state by regulating permitted releases into these waters.

General Response Activities for all Remedial Alternatives

General response actions and the pertinent ARARs are listed below.

Onsite Excavation/Construction Activities

Certain onsite excavation and/or construction activities will be necessary to prepare the site for remediation. These include the development of additional roads for vehicular traffic, removal of vegetation and soils, site grading, and construction activities designed to control surface water runoff. Excavated soils may be loaded into trucks and carried either to staging areas for packaging prior to transportation for disposal or to the onsite treatment area. Borrow soils used for backfilling the excavated areas will also be transported by truck.

Dust Emissions

Airborne pollutants may result from these excavation and construction activities. The primary concern is elevation of particulate concentrations resulting from earth-moving and site-grading activities. The New York State Division of Air Pollution Control has also promulgated regulations governing particulate emissions. These are listed in Appendix Table B-1, and are applicable to cleanup activities at Colonie.

Construction of Roads

In support of CWA § 404, 33 CFR 323.4 specifies best management practices (BMP) be applied during construction or maintenance of temporary or permanent farm, forest, or mining roads near wetland areas, including minimization of discharges of dredged or fill material into waters of the United States and minimization of vegetative disturbances. Road crossings must not disrupt the migration or other movement of aquatic life in the water body and borrow

material must be taken from upland sources whenever feasible. These may be relevant and appropriate for haul road construction during the remedial action.

Streambed Modification

If remedial activities extend near the bank of a stream, surface control measures such as piping of the creek or construction of coffer dams may be implemented as needed to prevent further runoff and/or impacts to the stream from cleanup activities. Activities impacting "waters of the state" are protected and permitted under the NYSPDES program. Consultation with New York State regarding plans for diversion of storm runoff will be necessary to ensure compliance with the intent of the NYSPDES.

The requirements of 40 CFR 230 *et seq.* are designed to prevent potential impacts on aquatic ecosystems by prohibiting the discharge of dredge or fill material into such ecosystems unless it can be demonstrated that such discharge will have no impact. The guidelines presented in 40 CFR 230 are applicable to permit specifications for disposal sites for dredge or fill material. However, the substantive requirements of 40 CFR 230, designed to restore and maintain the chemical, physical, and biological integrity of waters of the United States, are relevant and appropriate. These requirements are predominantly found in Subpart B, *Restrictions on Discharge* (40 CFR 230.10) and Subpart H, *Actions to Minimize Adverse Effects*.

Surface Water Control

Storm water discharges from activities at industrial sites involving construction operations that result in the disturbance of five acres or more total land have been included in the final rule for National Pollutant Discharge Elimination System (NPDES) permits for storm water discharges (40 CFR 122). Consultation with New York State is required to ensure compliance with the substantive requirements of the NPDES permitting process for stormwater discharges during construction activities.

The New York State Department of Environmental Conservation (NYSDEC) has promulgated two general permit requirements for storm water discharges associated with industrial activity under the State Pollution Discharge Elimination System (SPDES). These require dischargers to develop and implement storm water management plans and may require sampling of storm water discharges for pollutants.

The NYSPDES general permits control storm water discharges associated with industrial activity consistent with federal storm water regulations (55 FR 47990, November 16, 1990). The first general permit applies to existing and new storm water discharges associated with industrial activity as defined in 40 CFR 122.26(b) (14). Coverage under either general permit may be obtained by submitting a notice of intent (NOI) to the state. Therefore, this permitting process will be applicable to discharges during and following removal action at the site. Anticipated NYSPDES permits include a general permit for discharge of storm water associated

with construction activities (if more than five acres is disturbed) and an individual permit associated with wastewater discharge (point source) as a result of treating water.

Construction of Waste Piles

The regulations found in 40 CFR 264.251 "Waste Piles" apply to owners and operators of facilities that store or treat RCRA hazardous waste in piles. However, design and operation requirements for waste piles may be relevant and appropriate for staging of excavated soils prior to transportation by truck or rail for disposal.

Treatment of Water

Onsite treatment of water generated during excavation and decontamination activities (decontamination of trucks, backhoes, bulldozers, and other excavation equipment) will be in modular treatment units. The ARARs for these units will be the same as for the low temperature thermal desorption (LTTD) process utilized for soil treatment, and are described in the section on Onsite Treatment.

Discharge of Treated Water

Treated water will be periodically monitored to ensure compliance with NYSPDES criteria and will be discharged to the creek.

Disposal of Waste Materials

The requirements for disposal of soils or other remediation wastes depend on whether the waste contains RCRA-characteristic waste and/or low-level radioactive waste. Appendix Table B-1 lists the regulatory requirements for waste disposal, as described below.

Disposal of untreated soils, treatment residuals, or any other waste materials that are not TCLP toxic or do not contain radionuclides may be to any permitted solid waste landfill regulated under RCRA Subtitle D. Subtitle D establishes minimum national performance standards necessary to ensure that "no reasonable probability of adverse effects on health or the environment" will result from solid waste disposal practices. This satisfies the CERCLA requirement of protection of human health and the environment. Any soils, treatment residuals, or other waste materials generated during remedial activities that are tested and do not contain LLW but fail the TCLP must be managed as hazardous waste, and disposed of at RCRA Subtitle C permitted facility. Soils, treatment residuals, etc., that contain both RCRA characteristic waste and LLW may be managed as mixed waste.

Transportation

Removal of RCRA-characteristic waste from a CERCLA site is considered new generation of hazardous wastes. Any generator that transports or offers for transportation,

hazardous waste for offsite treatment, storage or disposal, must comply with the administrative as well as the substantive requirements detailed in RCRA Subparts B and C at 40 CFR 262. The waste must be packaged in accordance with U.S. Department of Transportation (DOT) regulations codified in 49 CFR Parts 175, 178, and 179. In addition to the manifest and pre-transport requirements of 40 CFR 262, standards for labeling, marking, and placarding are stated in 49 CFR Part 172. These requirements are considered ARARs for hazardous waste if the action meets the prerequisites as a generator of a hazardous waste. In addition, DOT regulations address shipments of radioactive materials.

The DOT regulations govern "transportation in commerce of hazardous materials." Government agencies offering hazardous materials for transportation in commerce or transporting hazardous materials in furtherance of a commercial enterprise are subject to the regulations. However, the Chief Counsel of the Research and Special Programs Administration (RSPA) under DOT has issued an opinion letter for DOE headquarters stating that DOE is not required to comply with the Hazardous Materials Transportation Act (HMTA) when it offers or transports hazardous materials in a government vehicle because those DOE activities are presumed to be for a governmental purpose and thus not in commerce (Kaleta 1991). The DOT requirements would be applicable if DOE does not close off the road to public use during transport; if the transport does not occur in a DOE operated government vehicle; or if access to the roads is not controlled by the use of gates and guards (Kaleta 1991). However, DOE has stated that it will comply with the DOT transportation requirements; therefore they are briefly summarized here.

The DOT Regulations for Hazardous Materials list general requirements for shipping and packaging at 49 CFR 172 and 173, and for requirements for carriage by public highway at 49 CFR 177. General standards for operating, handling and loading of rail cars are found at 49 CFR 174 (Subparts A, B, and C). A hazardous material includes radionuclides, any RCRA-listed or RCRA-characteristic waste, or any CERCLA substance which is in a quantity, in one package, which equals or exceeds the Reportable Quantity (RQ), as listed in the Appendix to 49 CFR 172.101 (49 CFR 171.8).

General requirements for shipping of hazardous materials are defined in 49 CFR 172, with specific marking, labeling, and placarding regulations for radioactive materials in 49 CFR 172.310, 172.403, and 172.556, respectively. General package design requirements are given in 49 CFR 173.411, with specific design requirements for Type A and B packaging found in 49 CFR 173.412 and 173.413, respectively.

New York State DOT regulations for hazardous materials are found at title 17, Part 507, which incorporates federal DOT standards by reference. DOE and its contractors and subcontractors at DOE-controlled sites are exempt from New York State regulations for Transport of Low-Level Radioactive Waste (title 6 Part 381); however, the substantive requirements of regulations are relevant and appropriate to offsite shipments of LLW and mixed waste from the Colonie site. The state regulations for placarding, packaging and manifests cross-reference the DOT regulations cited above.

Specific Response Activities

Institutional Controls

DOE Order 5400.5, Chapter IV, requires administrative controls for interim management in areas where residual radioactivity is in inaccessible locations and exceeds the guidelines specified in the Order. These controls include active and passive controls. Use limitations or deed restrictions may be necessary to control exposure to the residual radioactivity left in place. Use limitations could include restrictions on construction permits, and zoning restrictions, which would have to be enacted by the local governments who have jurisdiction over those matters. Deed restrictions could alter future land uses to reduce the potential for exposure, but would have to be put on the public record by current landowner. DOE could impose deed restrictions on any affected parcels it owns.

Containment

The RCRA definition of "landfill" is interpreted by EPA in the NCP as including non-discrete land areas in which there is generally dispersed contamination (55 FR 8760). Although the landfill closure requirements are not applicable to containment of wastes left in place at Colonie, the substantive landfill closure requirements of 40 CFR 264.310 will be considered as relevant and appropriate for the containment (capping) operations.

If waste is left in place, a landfill must be covered with a final cover designed and constructed to provide long-term minimization of migration of liquids through the capped area, function with minimum maintenance, promote drainage and minimize erosion or abrasion of the cover, and accommodate settling and subsidence so that the cover's integrity is maintained. The additional requirement to keep water and leachate from collecting in the waste, i.e., that the cap should have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present [40 CFR 264.228(a)(2)(iii); 40 CFR 264.310(a)], may not be considered relevant and appropriate for sites in which the constituents do not exhibit mobility in the environment (NCP, 55 FR 8763). This may be the case for some of the radionuclides present in soils at the Colonie site.

Post-closure care requirements for landfills [40 CFR 264.310(b)] include long-term maintenance of the cover, runon and runoff diversion systems, etc.

Removal

Construction and maintenance of access roads, removal of vegetation, construction of surface water controls, temporary modifications to reduce runoff, and excavation and removal of soils, etc., are discussed in Chapter 8 as components of alternatives. The site will be restored with the use of borrow soil, grading, replacement of pavement, and revegetation.

Onsite Treatment

RCRA treatment standards are applicable to treatment of waste to comply with LDRs for listed and characteristic wastes.

Miscellaneous Treatment Units

Treatment in a unit may involve chemical, thermal, or physical processes; however, the 40 CFR 264 regulations do not differentiate between these processes, considering them all to be via "miscellaneous treatment units." Standards for the operation and maintenance of miscellaneous units are codified in 40 CFR 264.601. These standards require location, design, operation, and closure of the unit in a manner that is protective of human health and the environment. Unlike other RCRA units where the general performance objectives are achieved by specified design standards, only generalized environmental performance standards are applied to miscellaneous units. The general environmental performance standards require that the owner demonstrate prevention of releases to groundwater or subsurface media [40 CFR 601(a)], surface waters or wetlands [40 CFR 601(b)], or air [40 CFR 601(c)] that could have adverse effects on human health and the environment. In demonstrating compliance with these standards, the operator must consider both waste and media characteristics.

The post-closure care regulations for miscellaneous treatment units are meant to ensure protection of human health and the environment (40 CFR 264.603). The general environmental performance standards for "miscellaneous units" apply to post-closure care.

Control of Air Emissions

The New York State Office of Air Pollution Control (APC) requires construction and operating permits for new air sources. Although permits are not required for CERCLA response actions, the substantive requirements of the APC regulations will be applicable for potential releases of hazardous pollutants from the LTTD process and air stripping unit.

Compliance with the NESHAP rule that limits emissions of radionuclides to the ambient air from DOE facilities to amounts that would not cause any member of the public to receive an effective dose equivalent of 10 mrem/year (40 CFR 61.92) is applicable for emissions from the LTTD unit.

Disposal of Treatment Residuals

Analysis of treatment residuals will be performed to determine whether they contain RCRA-toxic waste, and/or LLW. Based on the results of this analysis, the residuals will be disposed in accordance with pertinent regulations.

REFERENCES

Houlberg, L.M., G.T. Hawkins, RE Bock, and M.S. Salk, 1994. *Environmental Regulatory Update Table, September/October 1994*. ORNL/M-3271/R4. Martin Marietta Energy Systems, Inc., Oak Ridge National Laboratory, November.

Kaleta, J.S. 1991. Letter from J.S. Kaleta (Chief Counsel, U.S. Department of Transportation Research and Special Programs Administration) to Susan H. Denny (Director, Transportation Management Program, U.S. Department of Energy, Washington D.C.), April 23.

Table B-1. Action-Specific ARARs for the Remediation of the Colonie Site

Standard, Requirement, Criteria, or Limitation	Citation	Description of Requirement	Applicable or Relevant and Appropriate	Comment
OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA)	29 USC §§ 651-678 (1992, as amended)	Comply with established worker health and safety regulations.	Applicable	Under 40 CFR § 300.38, requirements of the Act apply to all response activities under the NCP.
OSHA - General Industry Standards	29 CFR Part 1910 (1991)	Comply with 8-hour time-weighted average concentration for various organic compounds.	Applicable	Proper respiratory equipment will be worn if it is impossible to maintain the work atmosphere below the concentration. Workers performing activities must have completed specific training requirements. Training requirements for workers at hazardous waste operations are specified in 29 CFR 1910.120.
OSHA - Occupational Noise Exposure	29 CFR § 1910.95 (1991)	Comply with 8-hour time-weighted exposure levels for noise.	Applicable	The proposed action will comply with this requirement and proper ear protection will be worn when allowable limits are exceeded.
OSHA - Occupational Health and Environmental Control-Ionizing Radiation	29 CFR § 1910.96 (1991)	Comply with radiation dose limits established for whole body and for specified parts of the body.	Applicable	These requirements are part of an employee protection law. Activities associated with the proposed action will comply with this requirement.
OSHA - Safety and Health Standards	29 CFR Part 1926 (1991)	Use specified safety equipment and procedures during site remediation.	Applicable	All appropriate safety equipment will be used onsite. In addition, safety procedures would be followed during onsite activities.
OSHA - Recordkeeping, Reporting, and Related Regulations	29 CFR Part 1904 (1991)	Recordkeeping and reporting requirements for an employer under OSHA.	Applicable	These requirements apply to all site contractors and subcontractors and must be followed during all site work.
CLEAN AIR ACT (CAA)	42 USC §§ 7401 - 7671q (1992, as amended)	Regulates hazardous air pollutants and sets air quality attainment standards.	Applicable	At Colonie, applicable particularly to the operation of motor vehicles.
National Emission Standards for Hazardous Air Pollutants	40 CFR Part 61 (1991)	Designates hazardous air pollutants and sets emission standards.	Applicable	
Discharge of Radioactive Pollutants to Air	40 CFR §§ 61.90-61.97 (1991)	Effluent limits for public: < 10 mrem/yr from DOE facility	Applicable	Applicable for general DOE operations, unless designated as a disposal site.
		Assessment and monitoring Compliance reporting and recordkeeping		

Table B-1. (continued)

Standard, Requirement, Criteria, or Limitation	Citation	Description of Requirement	Applicable or Relevant and Appropriate	Comment
CAA (continued) Discharge of Radioactive Pollutants to Air	40 CFR §§ 61.190-61.193 ¹ (1991) 42 USC §§ 7401-7671q (1992, as amended) 40 CFR Part 61, Subparts H and I (1991) 40 CFR § 61.223 (1991)	National emission standards for radon emissions from DOE facilities: this subpart applies to the design and operation of all storage and disposal facilities for radium-containing material (i.e., byproduct material as defined under section 11(e)(2) of the Atomic Energy Act of 1954 (as amended)) that are owned or operated by DOE that emit radon-222 into air (its facilities). Airborne emissions shall not cause members of the public to receive doses greater than: 10 mrem/yr effective dose equivalent. <20 pCi/m ³ /sec of Rn-222 as averaged for the source Exempted from source reporting under 40 CFR § 61.10 Radon effluent from uranium mill disposal: Requires testing and reporting after pile is covered Criteria provide implementation measurements Exempted from reporting under 40 CFR § 61.10	Applicable Applicable Applicable Applicable Applicable Applicable	Applicable to airborne emissions from DOE, NRC-licensed, and non-DOE Federal facilities during their operational period. Not applicable to: doses caused by Rn-220, Rn-222, and their respective decay products; facilities regulated under 40 CFR Parts 190, 191, or 192; and low-energy accelerators and users of sealed radiation sources. Applicable if the site is a disposal facility for uranium mill tailings.
Air Quality Standards	40 CFR Part 50 (1991) 40 CFR Part 52 (1991) 33 USC §§ 1251-1387 (1992, as amended)	National primary and secondary ambient air quality standards. Implementation Plans. Establishes water quality standards for surface waters and pretreatment standards for waste waters released to publicly-owned treatment works (POTWs)	Applicable Applicable	May be applicable or relevant and appropriate if excavation equipment exhaust and fugitive dust contribute significantly to air quality ranking for region. Applicable if waste water from a treatment facility discharges to a POTW.

- ¹ This subpart does not apply to facilities listed in or designated by the Secretary of Energy under Title I of the Uranium Mill Tailings Control Act of 1978.
- ² A millirem (mrem) = 0.001 rem, where a rem is a measure of dose equivalence for the biological effect of radiation of different types and energies on people.

Table B-1. (continued)

Standard, Requirement, Criteria, or Limitation	Citation	Description of Requirement	Applicable or Relevant and Appropriate	Comment
CWA (continued) National Pollutant Discharge Elimination System (NPDES)	40 CFR §§ 122.125 (1991)	Obtain permits for the discharge of pollutants from any point source into waters of the United States. Effluent limitations must protect beneficial uses of water.	Applicable	Remedial actions that would discharge a pollutant into surface waters would enter into the NPDES regulatory framework. A permit is not required for onsite CERCLA response actions, but the substantive requirements would apply. Offsite discharges would require a permit. The Act defines a point source as any discernible conveyance from which pollutants are or may be discharged.
Water Quality Standards Regulation	40 CFR Part 131 (1992)	Provides chemical-specific numeric criteria for toxic pollutants for states that have not fully complied with the requirements of the Clean Water Act.	Applicable	If any discharge to surface water took place, these standards would be Relevant and Appropriate.
Discharge of Radioactive Pollutants to Surface Waters	40 CFR § 440.32(b) (1991)	Do not discharge concentration of pollutants from mines as liquid effluent, other than: < 10 pCi/L of dissolved Rn-226 in any one day or < 3 pCi/L of dissolved Rn-226 averaged over 30 consecutive days ^a ;	Relevant and Appropriate	< 30 pCi/L of total Rn-226 in any one day or < 10 pCi/L of total Rn-226 averaged over 30 consecutive days; and 4 mg/L of uranium in any one day or 2 mg/L of uranium averaged over 30 consecutive days.
	40 CFR § 440.34(b) (1991)	Do not discharge process wastewater to navigable waters.	Relevant and Appropriate	If any discharge to surface water took place, these standards would be Relevant and Appropriate.
SAFE DRINKING WATER ACT (SDWA)	42 USC §§ 300f-300j-26 (1992, as amended)	Comply with established water quality standards for surface waters and pretreatment standards for waste waters released to publicly-owned treatment works (POTWs).	Applicable	Applicable if waste water from treatment facility discharges to POTW.

^a A Curie, or Ci, is the amount of radioactive material that produces 37 billion nuclear disintegrations per second. A picocurie, or pCi, is equal to 1×10^{-12} curies.

Table B-1. (continued)

Standard, Requirement, Criteria, or Limitation	Citation	Description of Requirement	Applicable or Relevant and Appropriate	Comment
SOLID WASTE DISPOSAL ACT (SWDA)	42 USC §§ 6901 - 6992k 40 CFR 264, Subpart I (1992)	Requires hazardous waste storage containers to be closed and in good condition.	Applicable	Applicable if hazardous waste is stored.
Land Disposal Restrictions, Prohibitions on Land Disposal	40 CFR Part 268, Subpart C (1992)	Establishes restrictions on land disposal of certain hazardous wastes.	Applicable	Applicable if land disposal is an alternative.
HIGHWAY IMPROVEMENT ACT OF 1982	23 USC §127, PL 97 - 424	Trucks using interstate highways should not exceed weight limits of 20,000 lbs for a single axle, 34,000 lbs on a tandem axle, and 80,000 lbs gross vehicle weight.	Applicable	These requirements are pertinent to the remedial action for materials shipped on highways (e.g., supplies shipped to the site or wastes transported offsite). In this case, the weight limits would be addressed during implementation.
HAZARDOUS MATERIAL TRANSPORTATION ACT, AS AMENDED BY HAZARDOUS MATERIALS TRANSPORTATION UNIFORM SAFETY ACT	49 USC §§ 1801 - 1812 40 CFR § 263 DOE 1540 Series	Generic requirements are established for minimizing the environmental impacts of spills or releases of hazardous materials, as are procedures for transporting hazardous waste.	Applicable	These requirements are pertinent to the remedial action if hazardous waste was transported offsite. In this case, the pertinent requirements (e.g., for spill response) would be addressed during implementation.
Hazardous Materials Regulations: Shippers - General Requirements for Shipments and Packaging; Subpart I, Radioactive Materials	49 CFR § 173 DOE 1540 Series	Low specific activity radioactivity materials should be packaged in strong, tight containers to prevent leakage of radioactivity under conditions normally incident to transportation, and the vehicles should be placarded. In exclusive use vehicles, external radiation levels on packages should be <200 mrem/hr or <1,000 mrem/hr if secured in a closed transport vehicle with no intermediate loading or unloading; external radiation levels on the outer surface of the vehicle are limited to <200 mrem/hr at any point and <10 mrem/hr at 2 m from the surface of the vehicle; and levels in any normally occupied space are limited to <2 mrem/hr.	Applicable	These requirements are pertinent to the remedial action if the waste was transported offsite because the average concentration of radionuclides in certain waste could meet the criteria for classification as low specific activity radioactive material. In this case, such requirements would be addressed during implementation.
RESOURCE CONSERVATION AND RECOVERY ACT (RCRA)	42 USC §§ 7401 - 7642 (1992, as amended)	Regulates the generation, transportation, treatment, storage, and disposal of hazardous wastes from "cradle to grave."	Applicable	Applicable only if the soils fail the TCLP test.
Clean Closure Requirements	40 CFR § 264.111 (1991)	Regulates clean closure to minimize the need for further maintenance and to control, minimize or eliminate the post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated runoff, or hazardous waste decomposition products to the ground or surface waters or to the atmosphere.	Applicable	Applicable if clean closure is the chosen alternative.

Table B-1. (continued)

Standard, Requirement, Criteria, or Limitation	Citation	Description of Requirement	Applicable or Relevant and Appropriate	Comment
Capping Requirements	40 CFR § 264.228 (1991)	Requires the maintenance of the integrity and effectiveness of the final cover, requires maintenance and monitoring of the leak detection system, requires the maintenance and monitoring of the groundwater monitoring system and requires the prevention of run-on and run-off from eroding or otherwise damaging the final cover.	Applicable	Applicable if an alternative of capping is chosen.
Post-Closure Requirements	40 CFR § 264.310 (1991)	Requires that the final cover provide long-term minimization of migration of liquids through the closed landfill, that minimum maintenance is required, that drainage is promoted and erosion is minimized, that settling and subsidence is controlled, and that the permeability is less than or equal to the permeability of any bottom liner system or natural subsoils present.	Applicable	Applicable only if clean closure is accomplished.
URANIUM MILL TAILINGS RADIATION CONTROL ACT (UMTRCA)	42 USC § 2022 (1992, as amended)	Control residual radioactive material at processing or depository sites and during site restoration.	Relevant and Appropriate	In the absence of other standards, may be relevant to establish clean-up standards.
Control of Uranium or Thorium Mill Tailings	40 CFR § 192.02(a) (1991)	Design control measures to be effective for up to 1,000 years, to the extent reasonably achievable, and in any case for at least 200 years.	Relevant and Appropriate	Relevant if inactive uranium processing took place on the sites designated for remedial action.
	40 CFR § 192.02(b) (1991)	Design control measures to ensure that releases of Rn-222 from residual radioactive material to the atmosphere will not exceed an average (applied over the entire surface of the disposal site and over at least a one-year period) release rate of 20 pCi/m ² /sec or increase the average annual concentration of Rn-222 in the atmosphere at or above any location outside the disposal site by more than 0.5 pCi/L.	Relevant and Appropriate	Relevant and Appropriate only if the facility is a disposal site.
	40 CFR § 192.04 and 192.02 (c)(3)	Concentration limits in groundwater include: combined radium-226 and -228.5 pCi/L; combined uranium-234 and -238 (based on site-specific ratio) 30 pCi/L; gross alpha particle activity (excluding radon and uranium) 15 pCi/L; 50 µg/L chromium; 1,000 µg/L barium; and 30 µg/L lead.	Relevant and Appropriate	Concentration limits for radionuclides are consistent with 6NYCRR703.

Table B-1. (continued)

Standard, Requirement, Criteria, or Limitation	Citation	Description of Requirement	Applicable or Relevant and Appropriate	Comment
UMTRCA (continued) Clean-up of Radioactively Contaminated Land	40 CFR §§ 192.12(a), 192.32(b)(2), and 192.41 (1991)	<p>Determine above - background concentration of Rn-226. If the above-background concentration of Rn-226 in land averaged over any area of 100 square meters is:</p> <ul style="list-style-type: none"> <li data-bbox="496 22 656 1089">< 5 pCi/g, no further clean-up is needed; <li data-bbox="544 22 656 1089">between 5 and 15 pCi/g, a decision concerning the need for further clean-up should be made based on the volume and depth of the contamination, as well as other site-specific characteristics (further guidance from EPA's Office of Radiation Programs should be sought in these cases); or <li data-bbox="768 22 784 1089">> 15 pCi/g, the contamination should be removed. 	Relevant and Appropriate	Relevant and Appropriate in the absence of other clean-up standards.
Clean-up of Radioactively Contaminated Buildings	40 CFR § 192.12(b)(1) (1991)	Achieve an annual average radon decay product concentration (including background) of less than 0.02 WL ⁴ in any occupied or habitable building. The radon decay product concentration shall not exceed 0.03WL.	Relevant and Appropriate	Relevant and Appropriate if no other standards are available regarding certain inactive uranium processing sites designated for remedial action under Title I of UMTRCA.

⁴ A working level, or WL, means any combination of short-lived radon decay products (through polonium-214) in one liter of air that will result in the emission of alpha particles with a total energy of 130 billion electron volts. An activity concentration of 10 picocuries per liter of radon-222 in equilibrium with its daughters corresponds approximately to 1 WL.

Table B-1. (continued)

Standard, Requirement, Criteria, or Limitation	Citation	Description of Requirement	Applicable or Relevant and Appropriate	Comment
UMTRCA (continued) Protection of Groundwater from Radioactive Contamination	40 CFR § 192.32(a) (1991)	Before closure, processing areas shall meet the following criteria: 40 CFR 264.221 for surface impoundment design requirements 40 CFR 264.92 for groundwater protection standards: Rn-226 or Rn-228 <5 pCi/L Monitoring program required within 1 year 40 CFR 190 and 40 CFR 440 for uranium byproduct materials Federal Radiation Protection Guidance implies as low as reasonably achievable (ALARA) as well 40 CFR §§ 192.32(a)(2) and 192.41 (1991)	Relevant and Appropriate Relevant and Appropriate Relevant and Appropriate	Relevant only if there is any discharge to groundwater and no other standards are available. Relevant to commercial and thorium processing sites in the absence of other standards.

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¹ Gross alpha particle activity means the total radioactivity due to all alpha particle emitters, excluding (for the purposes of 40 CFR Section 141.15) radon and uranium.

Table B-1. (continued)

Standard, Requirement, Criteria, or Limitation	Citation	Description of Requirement	Applicable or Relevant and Appropriate	Comment
UMTRCA (continued) Protection of Groundwater from Radioactive Contamination	40 CFR §§ 192.32(b)(1)(i), and 192.41 (1991)	Design disposal areas to be effective for up to 1,000 years to the extent reasonably achievable, and in any case for at least 200 years.	Relevant and Appropriate	Relevant in the absence of other standards.
	40 CFR §§ 192.32(b)(1)(ii)	Design disposal areas to ensure that releases of Ra-222 from residual radioactive material to the atmosphere will not exceed an average (applied over the entire surface of the disposal site and over at least a one-year period) release rate of 20 pCi/m ³ /sec.	Relevant and Appropriate	Relevant in the absence of other standards.
Closure of Uranium and Thorium Mill Tailings Sites	40 CFR § 192.32(b) (1991)	Disposal areas shall comply with the closure performance standard in 40 C.F.R. § 261.111 with respect to non-radiological hazards.	Relevant and Appropriate	Relevant to commercial and thorium processing sites in the absence of other standards.
Corrective Action of Radioactively Contaminated Groundwater	40 CFR § 192.33 (1991)	Develop a corrective action program as specified in 40 CFR § 264.100 and put it into operation as soon as is practicable, in no event later than 18 months after a finding of exceedance.	Relevant and Appropriate	Relevant to commercial and thorium processing sites in the absence of other standards. Groundwater at Colonic site is not known to be radioactively contaminated.
ATOMIC ENERGY ACT (AEA)	42 USC §§ 2011-2394 (1992, as amended)	Gives authority to DOE to regulate source material, special nuclear material and by-product material.	Applicable	This Act drives DOE Orders and NRC Regulations.
	42 USC § 2112 (1992)	DOE can distribute byproduct material only to individuals/organizations who are licensed by the NRC to receive such material.	Applicable	These requirements may be applicable to the disposal of radioactively contaminated material from the Colonic site at commercial facilities.
Procedural Rules for DOE Activities	10 CFR 820	DOE Orders related to nuclear safety are enforceable.	Applicable	Implements the Price-Anderson Amendments Act of 1988 enforceable against DOE and contractors, subcontractors, and vendors.
Radiation Protection of the Public and the Environment	10 CFR 834	Specifies applicable criteria for protection of the public (e.g., 100 mrem/yr for DOE operations for all pathways). Establishes residual radioactive materials criteria for the site and operations.	Applicable	Codified from DOE Order 5400.5

Table B-1. (continued)

Standard, Requirement, Criteria, or Limitation	Citation	Description of Requirement	Applicable or Relevant and Appropriate	Comment
Occupational Radiation Protection	10 CFR 835	Specifies radiation exposure standards for occupational workers; addresses the method for authorizing planned special exposures and exposures associated with emergency recovery activities; specifies the exposure limitations for minors and students; for the public entering the controlled area; and the criteria to be used to assess exposure as a whole (combining various types of exposure data).	Applicable	Codified from DOE Order 5480.11
DOE ORDERS				
General Environmental Protection Program	DOE Order 5400.1 Chap. I Chap. III Chap. IV	DOE environmental protection standards and requirements. Environmental protection standards. Environmental protection program plans. Environmental monitoring requirements.	Applicable Applicable Applicable Applicable	

Table B-1. (continued)

Standard, Requirement, Criteria, or Limitation	Citation	Description of Requirement	Applicable or Relevant and Appropriate	Comment
DOE ORDERS (continued) Radiation Protection for Occupational Workers	Section 9.g	Addresses monitoring requirements to assure exposures are below limits and ALARA, and to provide verification and documentation.	To Be Considered	
	Section 9.i	Specifies controls and limitations on the removal of material from the Controlled Area.	To Be Considered	
	Section 9.j	Specifies design goals for engineered systems.	To Be Considered	
	Section 9.k	Specifies labeling and posting requirements.	To Be Considered	
	Section 9.l	Specifies access control requirements.	To Be Considered	
	Section 9.m and 9.n	Specifies minimum recordkeeping requirements.	To Be Considered	
	Section 9.o	Specifies minimum training requirements.	To Be Considered	
	Section 9.q	Addresses the requirements for nuclear accident dosimetry.	To Be Considered	
	Section 9.r	Specifies the requirements for a contractor internal audit program.	To Be Considered	
Safety Requirements for the Packaging and Transportation of Hazardous Materials, Hazardous Substances, and Hazardous Wastes.	DOE Order 5480.3^f	Specifies requirements for the labeling and packaging of these substances in addition to 49 CFR Part 172.	To Be Considered	
Environmental Protection, Safety, and Health Protection Standards	DOE Order 5480.4^f	Specifies other applicable regulations, standards, requirements, and guidance.	To Be Considered	
Department of Energy Laboratory Accreditation Program for Personnel Dosimetry	DOE Order 5480.15^e	Specifies criteria for radiation dosimetry programs.	To Be Considered	

- Based on the language in the Price-Anderson Amendments Act of 1988, DOE Orders related "nuclear safety" are legally enforceable. "Nuclear safety" is not currently well-defined, and may include all orders related to radiological protection or be limited to criticality control and reactor operation. "Nuclear safety" will include transportation for the activities to which it applies. To ensure a conservative approach to selecting ARARs, DOE Orders that may be "nuclear-safety" related have been included as ARARs and not as TBCs (To Be Considered), even though they have not been formally promulgated.

Table B-1. (continued)

Standard, Requirement, Criteria, or Limitation	Citation	Description of Requirement	Applicable or Relevant and Appropriate	Comment
DOE Orders (continued) Radioactive Waste Management	DOE Order 5820.2A ¹	Establishes the criteria for the required radioactive waste activities associated with a DOE operation, including action to minimize and stabilize waste.	To Be Considered	
Chapter III		Addresses the management, treatment, and disposal of low-level radioactive waste (mill tailings and waste generated under 40 CFR 192 addressed in Chapter IV).	To Be Considered	
Chapter IV		Specifies criteria (40 CFR Part 192) for the disposal of waste (uranium tailings) from this site.	To Be Considered	
Chapter V		Establishes criteria for the decommissioning of radioactively contaminated facilities.	To Be Considered	
Chapter VI		Establishes the requirements for a waste management plan at DOE operations.	To Be Considered	
DOE GUIDELINES FOR RESIDUAL RADIOACTIVITY AT FUSRAP SITES	Project Document Control Center, BNL Oak Ridge, TN E-03195 (Revision 2, 3/87)	Establishes criteria for residual radioactive material in soil and other media.	To Be Considered	
RADON/RADON PROGENY MEASUREMENT PROFICIENCY PROGRAM	EPA-520/1-87-001	EPA criteria program to qualify individuals to complete radon/radon progeny measurements.	Relevant and Appropriate	Relevant to radon measurements in the absence of other standards.
RCRA (Hazardous Waste Transportation Standards)	40 CFR Part 262 (1991) 40 CFR Part 262, Subpart A (1991) 40 CFR § 262.11 (1991) 40 CFR Part 262, Subpart B (1991) 40 CFR Part 262, Subpart C (1991)	Standard applicable to generators of hazardous waste. Transportation related standards for generators. Methods and criteria for hazardous waste determination. Provides requirements for acquiring and using manifests. Package, label, mark, and placard in accordance with established requirements.	Applicable Applicable Applicable Applicable Applicable	Provides packaging, labeling, marking, and placarding pre-transport requirements, through reference to the DOT requirements for hazardous materials and waste shipments in 49 CFR.

Table B-1. (continued)

Standard, Requirement, Criteria, or Limitation RCRA (continued)	Citation	Description of Requirement	Applicable or Relevant and Appropriate	Comment
	40 CFR § 262.40 (1991)	<p>A generator must keep the generator copy of a signed manifest for three years or until receipt of a signed copy from the designated facility that received the waste. Retain this signed copy as a record for at least three years from the date the waste was accepted by the initial transporter.</p>	Applicable	<p>A generator must keep records of any test results, waste analyses, or other determination made in accordance with 262.11 for at least three years from the date that the waste was last sent to a treatment, storage, or disposal facility. The retention periods are automatically extended during the course of any unresolved enforcement action or as requested by the Administrator.</p> <p>The report must cover generator activities during the previous year and must include the information specified in this section.</p>
	40 CFR § 262.41 (1991)	<p>Biennial report. A generator who ships any hazardous waste offsite to a treatment, storage, or disposal facility must prepare and submit a single copy of the report on form 8700.13A to the Regional Administrator by March 1 of each even numbered year.</p>	Applicable	<p>EPA has adopted certain regulations of the Department of Transportation (DOT) governing the transportation of hazardous materials. DOT hazardous materials regulations that regulate intrastate, as well as interstate, shipments encompass the transportation of hazardous waste. DOT regulations in 49 CFR are fully applicable to state activities and are enforceable by DOT. DOT regulations are codified in Title 49, Code of Federal Regulations, Subchapter C, unless the shipment is made by water. A transporter who meets all applicable parts of 49 CFR Parts I/II through 179 and the requirements of 40 CFR Sections 263.111 and 263.31 will be deemed to be in compliance with this part. Regardless of DOT's action, EPA retains its authority to enforce these regulations.</p>
	40 CFR Part 263 (1991)	<p>Comply with established requirements for transportation of hazardous waste.</p>	Applicable	<p>A transporter who has not received an EPA identification number may obtain one by applying to the Administrator using EPA Form 8700-12. Upon receiving the request, the Administrator will assign an EPA identification number to the transporter.</p>
	40 CFR Part 263, Subpart A (1991)	<p>Do not transport hazardous wastes without having received an EPA identification number from the Administrator.</p>	Applicable	

Table B-1. (continued)

Standard, Requirement, Criteria, or Limitation	Citation	Description of Requirement	Applicable or Relevant and Appropriate	Comment
RCRA (continued)	40 CFR Part 263, Subpart B (1991)	<p>A generator must properly and completely fill out the manifest. A transporter may not accept hazardous waste from a generator unless it is accompanied by a manifest signed in accordance with this subpart.</p> <p>A transporter who delivers a hazardous waste to another transporter or to the designated facility must distribute the manifest to the accepting transporter or designated facility.</p>	Applicable	<p>For mixed waste, the DOT Basic Description must be entered for both the radioactive constituents and the constituents that make the contents a hazardous waste. When the generator signs the manifest, he/she signs the generator certification. The driver for each transporter must also complete certain sections of the manifest and return a signed copy to the generator before leaving the generator's property.</p>
	40 CFR § 263.30 (1991)	In the event of a discharge of hazardous waste during transportation, the transporter must take appropriate immediate action to protect human health and the environment (e.g., notify local authorities, dike the discharge area).	Applicable	Immediate action for hazardous waste discharge.
	40 CFR § 263.31 (1991)		Applicable	<p>A transporter must clean up any hazardous waste discharge that occurs during transportation or take such action as may be approved by Federal, State, or local officials so that the hazardous waste discharge no longer presents a hazard to human health or the environment.</p>

Table B-1. (continued)

Standard, Requirement, Criteria, or Limitation	Citation	Description of Requirement	Applicable or Relevant and Appropriate	Comment
New York Air Pollution Control Regulations	N.Y. COMP. CODES R. & REGS. tit. 6 Part 200 (BNA)	Establishes general provisions of the State of New York Air Pollution Control Regulations.	Applicable	Although permits are not required, the sites must comply with the substantive provisions of the regulations.
Permit to Construct/Certificate to Operate	N.Y. COMP. CODES R. & REGS. tit. 6, Part 201 (BNA)	A permit to construct or a certificate to operate an air emission source will not be issued if the operation of the source will:	Applicable	Applies to remediation activities that include a controlled air emission source.
		<ul style="list-style-type: none"> • prevent the attainment or maintenance of any applicable ambient air quality standard. • result in a violation of any of the provisions of Chapter III of Title 7 of the Official Compilation of Codes, Rules and Regulations of the State of New York; • result in a violation of any applicable control strategy of a Federally approved air quality implementation plan in effect at the time that an application is submitted. 		<p>May be applicable or relevant and appropriate if excavation equipment exhaust and fugitive dust contribute significantly to air quality ranking for region.</p>
General Prohibitions	N.Y. COMP. CODES R. & REGS. tit. 6, Part 211 (BNA)	<ul style="list-style-type: none"> • Prohibits the emission of air contaminants of such quantity, characteristic, or duration which are injurious to human, plant, or animal life or to property, or which unreasonably interfere with the comfortable enjoyment of life or property. This prohibition applies, but is not limited to any particulate, fume, gas, mist, odor, smoke, vapor, pollen, toxic or deleterious emission, either alone or in combination with others. • Establishes limitations on visible emissions, except as permitted, of any material having an opacity equal to or greater than 20 percent (six minute average) except for one continuous six-minute period per hour of not more than 57 percent opacity; • Establishes restrictions on the use of volatile organic compounds to liquify asphalt used for paving. 	Applicable	Applies to remediation activities that include a controlled air emission source.

Table B-1. (continued)

Standard, Requirement, Criteria, or Limitation	Citation	Description of Requirement	Applicable or Relevant and Appropriate	Comment
New York Air Pollution Control Regulations (continued) General Process Emission Sources	N.Y. COMP CODES R. & REGS. tit. 6, Part 212 (BNA)	The Commissioner will issue an environmental rating for each air contaminant from each emission point when an application is made for a permit to construct or permit to operate a process emission source.	Applicable	<p>Applies to remediation activities that include a process emission source.</p> <p>The following information will be considered in making a determination of the environmental rating:</p> <ul style="list-style-type: none"> • toxic and other properties and emission rate potential of the air contaminant; • location of the source with respect to residences or other sensitive environmental receptors, including a consideration of the area's anticipated growth; • emission dispersion characteristics at or near the source, taking into account the physical location of the source relative to surrounding buildings and terrain; and • the projected maximum cumulative impact of taking into account emissions from all sources in the facility under review and the preexisting ambient concentration of the air contaminant under review.

Table B-1. (continued)

Standard, Requirement, Criteria, or Limitation	Citation	Description of Requirement	RATING CRITERIA	Applicable or Relevant and Appropriate	Comment
New York Air Pollution Control Regulations (continued)					
		A The discharge of an air contaminant results, or may result, in serious adverse effects on receptors or the environment. These effects may be of a health, economic, or aesthetic nature or any combination of these.	A Applicable		
		B The discharge of an air contaminant results, or may result in only moderate and essentially localized effects; or where the multiplicity of sources of the contaminant in any given area requires an overall reduction of the atmospheric burden of that contaminant.	B Applicable		
		C The discharge of an air contaminant may result in localized adverse effects of an aesthetic or nuisance nature.	C Applicable		
		D The discharge of an air contaminant will not result in measurable or observable effects on receptors, nor add to an existing or predictable atmospheric burden of that contaminant which may cause adverse effects, considering properties and concentrations of the emissions, isolated conditions, stack height and other factors.	D Applicable		

Table B-1. (continued)

Standard, Requirement, Criteria, or Limitation	Citation	Description of Requirement	Applicable or Relevant and Appropriate	Comment
New York Air Pollution Control Regulations (continued)	N.Y. COMP. CODES R. & REGS. tit. 6, § 212.2 (BNA)	Establishes emission restrictions for existing emission sources.	Applicable	
Emissions From Existing Emission Sources				
Emissions From New Emission Sources and/or Modifications	N.Y. COMP. CODES R. & REGS. § 212.3 (BNA)	Establishes emission restrictions for new emission sources and/or modifications.	Applicable	
Determining Applicable Emission Standards	N.Y. COMP. CODES R. & REGS. tit. 6, § 212.4 (BNA)	Establishes emission standards where air contaminants from two or more devices or contrivances are emitted to the outdoor atmosphere through a single emission point.	Applicable	A process emission source, subject to the Federal new source performance standards in 40 CFR Part 60, the national emission standards for hazardous air pollutants in 40 CFR Part 61, or to PCB disposal criteria in 40 CFR Part 761, satisfies the requirements of this Part if the source owner can demonstrate that the source is in compliance with the respective Federal regulation.
Opacity of Emissions Limited	N.Y. COMP. CODES R. & REGS. tit. 6, § 212.5 (BNA)	Establishes limitations for opacity of emissions.	Applicable.	An equivalent opacity standard will only be granted where reasonably available control technology (RACT) has been used. In any event, the source owner or operator will not cause or allow emissions to exceed the equivalent opacity.
Open Fires	N.Y. COMP. CODES R. & REGS. tit. 6, § 215.2 (BNA)	Unless permitted by Section 215.3, no person shall burn, cause, suffer, allow or permit the burning in an open fire:	Applicable	May be applicable to remediation activities.
		<ul style="list-style-type: none"> • refuse at a refuse disposal area; • refuse for salvage; • rubbish generated by industrial or commercial activities for onsite disposal; • rubbish generated by land clearing or demolition for the erection of any structure. 		

Table B-1. (continued)

Standard, Requirement, Criteria, or Limitation	Citation	Description of Requirement	Applicable or Relevant and Appropriate	Comment
Restricted Burning	N.Y. COMP. CODES R. & REGS. tit. 6, § 215.3 (BNA)	Restricted burning. Burning in an open fire, provided it is not contrary to other law, will be permitted.	Applicable	Burning in an open fire will be permitted provided it is not contrary to other law and permit holder operates within constraints of a valid permit.
Emissions from Motor Vehicles Propelled by Gasoline Engine	N.Y. COMP. CODES R. & REGS. tit. 6, Subpart 217-1 (BNA)	Gasoline powered motor vehicle(s) subject to an exhaust emission test will not be operated in such a manner that it emits carbon monoxide (CO) or hydrocarbons (HC) in the exhaust in excess of the standards below or that has a combined CO and carbon dioxide emission less than 6.0 percent when measured using the test procedure specified in the DMV's "Emissions Inspection Procedure" document.	Applicable	May be applicable to excavation equipment used in remediation activities.
Vehicles Propelled by Diesel Engines	N.Y. COMP. CODES R. & REGS. tit. 6, Subpart 217-3 (BNA)	Vehicle Model Year Light 1974 + Heavy 1969 + 1970-73 1974-78 1975-78 1979-80 1981 +	CO Limit <u>(%)</u> 7.0 800 6.0 700 4.5 600 3.0 300 2.5 300 1.2 220	HC Limit <u>(PPM)</u> 800 7.0 700 600 300 300 220
Application for Specific Permits	N.Y. COMP. CODES R. & REGS. tit. 6, § 621.4 (BNA)	Vehicle(s) propelled by diesel engines shall not be operated in such a manner that exhaust emission of a shade of blue, black, or grey equal to or greater than Number 1 on the Ringelman chart or equivalent standard acceptable to the Commission is produced for a continuous period of more than five seconds when the vehicle is in motion. Do not allow a bus or truck to idle for more than five consecutive minutes when the vehicle is not in motion, except as otherwise permitted by section 218.3.	Applicable	May be applicable to excavation equipment used in remediation activities.
		Application for specific permits. Includes additional information to be furnished, in order for the application to be determined complete, and schedules of fees.	Applicable	Applicable to permits sought under the Environmental Conservation Law (ECL) article 19 and 6 N.Y. COMP. CODES R. & REGS. Parts 201, 203 and 215-Air Pollution Control.

Table B-1. (continued)

Standard, Requirement, Criteria, or Limitation	Citation	Description of Requirement	Applicable or Relevant and Appropriate	Comment
Application for Permit Renewals or Modifications	N.Y. COMP. CODES R. & REGS. tit. 6, § 621.13 (BNA)	Applications to renew or modify permits must be submitted to the regional permit administrator. Such application shall provide information supporting the action sought, shall include payment of any fees, and, if for a modification, shall include a statement of necessity or reasons for modification.	Applicable	Applications for renewals must be submitted no less than 30 calendar days prior to permit expiration with the exception for Standard Pollutant Discharge Elimination System (SPDES), hazardous waste manufacturing facility (HWMF), air pollution control (APC), or solid waste manufacturing facility (SWMF) permits which must be submitted no less than 180 calendar days prior to permit expiration.
New York Ambient Air Quality Standard - Air Quality Classification System	N.Y. COMP. CODES R. & REGS. tit. 6, Part 256 (BNA)	Air Quality Classification System. Describes the four general levels of social and economic development and pollution potentials that exist in the State of New York. The land uses associated with the classification levels assigned to the Geographical areas of the state are detailed below:	Applicable	Air quality standards for the Colonie site will be set by Part 257 and the appropriate level assigned from part 256.

Table B-1. (continued)

Standard, Requirement, Criteria, or Limitation	Citation	Description of Requirement	Applicable or Relevant and Appropriate	Comment
New York Ambient Air Quality Standards - General Application	N.Y. COMP. CODES R. & REGS. tit. 6, § 257-1.3 (BNA)	Standards shall be applicable, as specified in each individual subpart, to the levels as described in Part 256 and as assigned in Subchapter C.	Applicable	Emissions in a classified area shall be controlled to the extent required by the Commissioner to be compatible with standards established in other areas.
Compliance	N.Y. COMP. CODES R. & REGS. tit. 6, § 257-1.4 (BNA)	Ambient air concentrations shall be determined in accordance with the procedures and techniques as specified in the standard or in accordance with other methods or techniques acceptable to the commissioner. The Commissioner may publish acceptable methods from time to time.	Applicable	To attain compliance, this regulation:
Measurement	N.Y. COMP. CODES R. & REGS. tit. 6, Subpart 257-2 (BNA)	Prohibits the emission of contaminants from an emission source which alone or in combination with emissions from other sources cause contravention of air quality standards promulgated in Part 257 of Title 6.	Prohibits the emissions of odorous, toxic, or deleterious substance in concentrations or of such duration that will affect human health or well-being, or unreasonably interfere with the enjoyment of property or unreasonably and adversely affect plant or animal life.	Applies to remediation activities that include a controlled air emission source. May be applicable or relevant and appropriate if excavation equipment exhaust and fugitive dust contribute significantly to air quality ranking for region.
			Not Applicable	Sulfur dioxide sampling is done for regional air quality determinations.

Table B-1. (continued)

Standard, Requirement, Criteria, or Limitation	Citation	Description of Requirement	Applicable or Relevant and Appropriate	Comment																
Air Quality Standards - Particulates	N.Y. COMP. CODES R. & REGS. tit. 6, Subpart 257.3 (BNA)	Sets forth measurement techniques, sampling frequencies, 24-hour, annual, 30-day, 60-day and 90-day standards for suspended particulates, and 12-month standard for settleable particulates (dustfall).	Applicable	May be applicable to remediation activities such as excavation.																
	N.Y. COMP. CODES R. & REGS. tit. 6, § 257.3.3 (BNA)	<p>Establishes the following standards for suspended particulates:</p> <ul style="list-style-type: none"> • For any 24-hour period the average concentration shall not exceed 250 $\mu\text{g}/\text{m}^3$ more than once a year. • During any 12 consecutive months, the geometric mean of the 24-hour average concentrations shall not exceed: <table> <tr> <td>Level I</td> <td>- 45 $\mu\text{g}/\text{m}^3$</td> </tr> <tr> <td>Level II</td> <td>- 55 $\mu\text{g}/\text{m}^3$</td> </tr> <tr> <td>Level III</td> <td>- 65 $\mu\text{g}/\text{m}^3$</td> </tr> <tr> <td>Level IV</td> <td>- 75 $\mu\text{g}/\text{m}^3$</td> </tr> </table> • During any 30 consecutive days, the arithmetic mean of the 24-hour average concentrations at any location shall not exceed: <table> <tr> <td>Level I</td> <td>- 80 $\mu\text{g}/\text{m}^3$</td> </tr> <tr> <td>Level II</td> <td>- 100 $\mu\text{g}/\text{m}^3$</td> </tr> <tr> <td>Level III</td> <td>- 115 $\mu\text{g}/\text{m}^3$</td> </tr> <tr> <td>Level IV</td> <td>- 135 $\mu\text{g}/\text{m}^3$</td> </tr> </table> 	Level I	- 45 $\mu\text{g}/\text{m}^3$	Level II	- 55 $\mu\text{g}/\text{m}^3$	Level III	- 65 $\mu\text{g}/\text{m}^3$	Level IV	- 75 $\mu\text{g}/\text{m}^3$	Level I	- 80 $\mu\text{g}/\text{m}^3$	Level II	- 100 $\mu\text{g}/\text{m}^3$	Level III	- 115 $\mu\text{g}/\text{m}^3$	Level IV	- 135 $\mu\text{g}/\text{m}^3$	Applicable	May be applicable to remediation activities such as excavation.
Level I	- 45 $\mu\text{g}/\text{m}^3$																			
Level II	- 55 $\mu\text{g}/\text{m}^3$																			
Level III	- 65 $\mu\text{g}/\text{m}^3$																			
Level IV	- 75 $\mu\text{g}/\text{m}^3$																			
Level I	- 80 $\mu\text{g}/\text{m}^3$																			
Level II	- 100 $\mu\text{g}/\text{m}^3$																			
Level III	- 115 $\mu\text{g}/\text{m}^3$																			
Level IV	- 135 $\mu\text{g}/\text{m}^3$																			

Table B-1. (continued)

Standard, Requirement, Criteria, or Limitation	Citation	Description of Requirement	Applicable or Relevant and Appropriate	Comment																
Air Quality Standards - Particulates (continued)	New York Comp. Codes R. and Regs. Title 6 §357-33 (continued)	<ul style="list-style-type: none"> During any 60 consecutive days, the arithmetic mean of the 24-hour average concentrations at any location shall not exceed: <table> <tr><td>Level I</td><td>- 70$\mu\text{g}/\text{m}^3$</td></tr> <tr><td>Level II</td><td>- 85$\mu\text{g}/\text{m}^3$</td></tr> <tr><td>Level III</td><td>- 95$\mu\text{g}/\text{m}^3$</td></tr> <tr><td>Level IV</td><td>- 115$\mu\text{g}/\text{m}^3$</td></tr> </table> During any 90 consecutive days, the arithmetic mean of the 24-hour average concentrations at any location shall not exceed: <table> <tr><td>Level I</td><td>- 65$\mu\text{g}/\text{m}^3$</td></tr> <tr><td>Level II</td><td>- 80$\mu\text{g}/\text{m}^3$</td></tr> <tr><td>Level III</td><td>- 90$\mu\text{g}/\text{m}^3$</td></tr> <tr><td>Level IV</td><td>- 105$\mu\text{g}/\text{m}^3$</td></tr> </table> Standards described for 30, 60, and 90 consecutive days are intended for enforcement purpose. Monitoring will be performed only as required. 	Level I	- 70 $\mu\text{g}/\text{m}^3$	Level II	- 85 $\mu\text{g}/\text{m}^3$	Level III	- 95 $\mu\text{g}/\text{m}^3$	Level IV	- 115 $\mu\text{g}/\text{m}^3$	Level I	- 65 $\mu\text{g}/\text{m}^3$	Level II	- 80 $\mu\text{g}/\text{m}^3$	Level III	- 90 $\mu\text{g}/\text{m}^3$	Level IV	- 105 $\mu\text{g}/\text{m}^3$	Applicable	See comment on previous page.
Level I	- 70 $\mu\text{g}/\text{m}^3$																			
Level II	- 85 $\mu\text{g}/\text{m}^3$																			
Level III	- 95 $\mu\text{g}/\text{m}^3$																			
Level IV	- 115 $\mu\text{g}/\text{m}^3$																			
Level I	- 65 $\mu\text{g}/\text{m}^3$																			
Level II	- 80 $\mu\text{g}/\text{m}^3$																			
Level III	- 90 $\mu\text{g}/\text{m}^3$																			
Level IV	- 105 $\mu\text{g}/\text{m}^3$																			
Standard for Settleable Particulates	N.Y. COMP. CODES R. & REGS. tit. 6, § 257-3.4 (BNA)	Settleable particulates (dustfall) standards. <ul style="list-style-type: none"> During any 12 consecutive months, 50 percent of the values of the 30-day average concentrations shall not exceed: <table> <tr><td>Level I</td><td>- 0.30 mg/cm²/mo</td></tr> <tr><td>Level II</td><td>- 0.30 mg/cm²/mo</td></tr> <tr><td>Level III</td><td>- 0.40 mg/cm²/mo</td></tr> <tr><td>Level IV</td><td>- 0.60 mg/cm²/mo</td></tr> </table> During any 12 consecutive months, 84 percent of the values of the 30-day average concentrations shall not exceed: <table> <tr><td>Level I</td><td>- 0.45 mg/cm²/mo</td></tr> <tr><td>Level II</td><td>- 0.45 mg/cm²/mo</td></tr> <tr><td>Level III</td><td>- 0.60 mg/cm²/mo</td></tr> <tr><td>Level IV</td><td>- 0.90 mg/cm²/mo</td></tr> </table> 	Level I	- 0.30 mg/cm ² /mo	Level II	- 0.30 mg/cm ² /mo	Level III	- 0.40 mg/cm ² /mo	Level IV	- 0.60 mg/cm ² /mo	Level I	- 0.45 mg/cm ² /mo	Level II	- 0.45 mg/cm ² /mo	Level III	- 0.60 mg/cm ² /mo	Level IV	- 0.90 mg/cm ² /mo	Applicable	May be applicable to remediation activities such as excavation.
Level I	- 0.30 mg/cm ² /mo																			
Level II	- 0.30 mg/cm ² /mo																			
Level III	- 0.40 mg/cm ² /mo																			
Level IV	- 0.60 mg/cm ² /mo																			
Level I	- 0.45 mg/cm ² /mo																			
Level II	- 0.45 mg/cm ² /mo																			
Level III	- 0.60 mg/cm ² /mo																			
Level IV	- 0.90 mg/cm ² /mo																			
Measurement	N.Y. COMP. CODES R. & REGS. tit. 6 § 257-3.5 (BNA)	Identifies methodology and hardware for measurement activities.	Not Applicable	Particulate sampling is done for regional air quality determinations.																

Table B-1. (continued)

Standard, Requirement, Criteria, or Limitation	Citation	Description of Requirement	Applicable or Relevant and Appropriate	Comment
Sampling Frequency	N.Y. COMP. CODES R. & REGS. tit. 6, § 257-3.6 (BNA)	Sampling used to determine compliance with standards shall adhere to the following frequency guidelines: <ul style="list-style-type: none">• Annual Standard - every 6th day sampling, minimum 50 samples;• 24-hour Standard - every 6th day sampling, minimum 50 samples;• 30-day Standard - every day sampling, minimum 24 samples;• 60-day standard - every other day sampling, minimum 24 samples;• 90-day standard - every other day sampling, minimum 36 samples.	Not Applicable	Sampling standards for suspended particulates are only for the State of New York.
Air Quality Standard - Carbon Monoxide Standard	N.Y. COMP. CODES R. & REGS. tit. 6, § 257-4.3 (BNA)	Establishes the following carbon monoxide standards: <ul style="list-style-type: none">• For an 8-hour period, the average concentration of carbon monoxide shall not exceed 9 ppm^a more than once in any 12 consecutive months;• For a 1-hour period, the average concentration of carbon monoxide shall not exceed 35 ppm^a more than once in any 12 consecutive months.	Applicable	Applicable to all levels identified in § 256.
Air Quality Standard - Photochemical Oxidants	N.Y. COMP. CODES R. & REGS. tit. 6, Subpart 257-5 (BNA)	Establishes the following photochemical oxidants standards: <ul style="list-style-type: none">• In any one hour period, the average concentration of photochemical oxidant shall not exceed 0.08 ppm^b more than once in any 12 consecutive months.	Applicable	Applicable to all levels identified in Part 256. An equivalent method for measurement may be approved by the commissioner.

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^a Corresponds to Federal Standard of 10 mg/m³ (at temperature of 25°C and pressure of 760 mm of mercury).

^b Corresponds to Federal Standard of 160 µg/m³ (at temperature of 25°C and pressure of 760 mm of mercury).

, Corresponds to Federal Standard of 160 µg/m³ (at temperature of 25°C and pressure of 760 mm of mercury).

Table B-1. (continued)

Standard, Requirement, Criteria, or Limitation	Citation	Description of Requirement	Applicable or Relevant and Appropriate	Comment
Air Quality Standard - Hydrocarbons (Non-Methane)	N.Y. COMP. CODES R. & REGS. tit. 6, Subpart 257-6 (BNA)	Establishes the following hydrocarbons (Non-Methane) standard: <ul style="list-style-type: none">• During the three hour period from 6 to 9 a.m., the average non-methane hydrocarbon concentration must not exceed 0.24 ppm^a more than once in any 12 consecutive months.	Applicable	Applicable to all levels identified in Part 256. Other methods of measurement may be approved by the commissioner.
Air Quality Standard - Nitrogen Dioxide	N.Y. COMP. CODES R. & REGS. tit. 6, Subpart 257-7 (BNA)	Establishes the following nitrogen dioxide standards: <ul style="list-style-type: none">• During any 12 consecutive months, the annual average of the 24-hour concentrations, shall not exceed 0.05 ppm (100$\mu\text{g}/\text{m}^3$).	Applicable	Applicable to all levels identified in Part 256. Concentration may be determined by method specified or an equivalent method approved by the commissioner.
Air Quality Standard - Fluoride	N.Y. COMP. CODES R. & REGS. tit. 6, Subpart 257-8 (BNA)	Establishes the following fluoride standards: <ul style="list-style-type: none">• Total fluorides, ppm, dry weight basis (as F), in and on forage for consumption by grazing ruminants. Average concentration shall be less than the following for all levels:<ul style="list-style-type: none">-For growing season (not to exceed 6 consecutive months)--40 ppm-For any 60-day period--60 ppm-For any 30-day period--80 ppm• Gaseous fluorides in air (ppm of air) as F--all levels (25 degrees Centigrade, 760 millimeters [mm] mercury [Hg])<ul style="list-style-type: none">-12-hour averages to be less than 4.5 ppb (3.7 $\mu\text{g}/\text{m}^3$)-24-hour averages to be less than 3.5 ppb (2.85 $\mu\text{g}/\text{m}^3$)-1 week average to be less than 2.0 ppb (1.65 $\mu\text{g}/\text{m}^3$)-1 month averages to be less than 1.0 ppb (0.8 $\mu\text{g}/\text{m}^3$)	Applicable	Applicable to all levels identified in Part 256.
Air Quality Standards - Beryllium	N.Y. COMP. CODES R. & REGS. tit. 6, Subpart 257-9 (BNA)	Requires that during any month, the average concentration of beryllium shall not exceed 0.01 $\mu\text{g}/\text{m}^3$.	Applicable	Identifies measurement methodology.

Table B-1. (continued)

Standard, Requirement, Criteria, or Limitation	Citation	Description of Requirement	Applicable or Relevant and Appropriate	Comment
Air Quality Standards - Hydrogen Sulfide	N.Y. COMP. CODES R. & REGS. tit. 6, Subpart 257-10 (BNA)	Establishes the standard that in any 1-hour period, the average concentration of hydrogen sulfide shall not exceed 0.01 ppm (14 µg/m ³).	Applicable	Applicable to all levels identified in Part 256. Identifies measurement methodology.
New York Waste Transport Permit Regulations	N.Y. COMP. CODES R. & REGS. tit. 6, § 364.1 (BNA)	The collection, transport, and delivery of regulated waste, originating or terminating at a location within New York, will be governed in accordance with Part 364.	Applicable	Applicable if site's wastes fall into regulated categories.
New York Regulations for Transportation of Hazardous, Radioactive, or Mixed Waste	N.Y. COMP. CODES R. & REGS. tit. 6, § 381 (see also tit. 17, § 507)	Part 381 establishes transport permit standards for transporters of low-level radioactive waste (LLRW), and standards for use of the NYS LLRW manifest system for all low-level waste (LLW) shipments into within or through New York State.	Relevant and Appropriate	Not directly applicable to DOE-controlled sites or contractors but substantive requirements are relevant and appropriate.
Permit Requirements	N.Y. COMP. CODES R. & REGS. tit. 6, § 364.2 (BNA)	Without a valid permit regulated waste will not be:	Applicable	Although a permit is not required, the substantive provisions of the regulation must be met.
		<ul style="list-style-type: none"> • collected or removed from its point of origin, generation, or occurrence; • transported; • delivered to any TSD facility or otherwise disposed or relinquished; • landspread seepage; or • landspread sewage sludge. 		

Table B-1. (continued)

Standard, Requirement, Criteria, or Limitation	Citation	Description of Requirement	Applicable or Relevant and Appropriate	Comment
Permitting Standards	N.Y. COMP. CODES R. & REGS. tit. 6, § 364.4 (BNA)	A decision to issue or deny a permit for the transport of a regulated waste is based on:	Applicable	Applicable to waste transporters of regulated waste from the Colonie site associated with remedial actions.
Vehicle/Operation Requirements		<ul style="list-style-type: none"> • Status of receiving facility: Receiving facility must be authorized to accept such waste, must operate under an active department issued order on consent, provide proof of authorization to operate if facility is outside the jurisdiction of New York, or if facility is not required by the state to be licensed, permitted, or certified to operate. 	<ul style="list-style-type: none"> • Compliance status of receiving facility. 	<ul style="list-style-type: none"> • Compliance history and reliability of applicant. Waste transporter permit may be denied, revoked, suspended, or modified based on the unsuitability of the applicant (under provisions of Environmental Conservation Law § 27-0913).
Hazardous and Low-level Radioactive Waste Manifest Systems	N.Y. COMP. CODES R. & REGS. tit. 6, § 364.6 (BNA)	Governs conditions under which regulated wastes may be transported.	Applicable	Applicable to transport of regulated waste from the Colonie site during remedial activities.
	N.Y. COMP. CODES R. & REGS. tit. 6, §§ 364.7-8 (BNA)	Transporters of hazardous and low-level radioactive waste shall comply with applicable waste manifest systems (Part 372).	Applicable	Applicable to transporters of hazardous and low-level radioactive waste.
				Transporters of low-level radioactive waste must send copy of manifest to Department within 15 business days of relinquishing possession of the waste.

Table B-1. (continued)

Standard, Requirement, Criteria, or Limitation	Citation	Description of Requirement	Applicable or Relevant and Appropriate	Comment
New York Rules on Hazardous Waste Program Fees Fees Related to Clean-up, Remediation, or Corrective Action	N.Y. COMP. CODES R. & REGS. tit. 6, § 483.4 (BNA)	Generator fees shall not be payable for waste resulting from services which are provided:	Applicable	Applicable to the clean-up, remediation, or corrective action associated with the Colonie site.
		<ul style="list-style-type: none"> • under contract with the department, EPA, or a court order related to the clean-up or remediation of a hazardous material or hazardous waste spill, discharge, or surficial clean-up, • pursuant to ECL or a removal action pursuant to CERCLA; • under contract for or with approval of department for clean-up and removal of petroleum spill or discharge; • under the order of a court, the Department of Health, EPA, or CERCLA related to an inactive hazardous waste disposal site; • voluntarily and without expectation of monetary compensation in accordance with subdivision 1 of ECL § 27-1321; or • under permit or order requiring corrective action pursuant to title 9 of ECL article 27 or RCRA. 		
Waste Transporter Program Fees	N.Y. COMP. CODES R. & REGS. tit. 6, Part 484 (BNA)	Fee schedules.	Applicable	Applicable if wastes to be transported are included in the regulation.
New York Identification and Listing of Hazardous Wastes Regulations	N.Y. COMP. CODES R. & REGS. tit. 6, § 371.3 (BNA)	Lists regulated hazardous waste. Each hazardous waste is assigned an EPA Hazardous Waste Number which must be used in complying with the notification requirements of § 3010 of RCRA or certain recordkeeping and reporting requirements under §§ of this Title.	Applicable	Verify that waste found at the Colonie site is a listed hazardous waste.
	Appendix 23	Lists hazardous constituents. Note: Part 371 was amended (eff. 1-15-95) to incorporate current EPA criteria for listing hazardous wastes (55 FR 18726, 5/4/90 and 57 FR 12, 1/2/92).		
New York Hazardous Waste Manifest System Regulations	N.Y. COMP. CODES R. & REGS. tit. 6, § 372.2 (BNA)	General standards and specific manifest requirements for generators of hazardous waste.	Applicable	Applicable if Colonie site meets the criteria of a generator of hazardous materials as defined in N.Y. COMP. CODES R. & REGS. tit. 6, § 372.1 (d).

Table B-1. (continued)

Standard, Requirement, Criteria, or Limitation	Citation	Description of Requirement	Applicable or Relevant and Appropriate	Comment
New York Hazardous Waste Treatment, Storage, and Disposal Facility Permitting Requirements	N.Y. COMP. CODES R. & REGS. tit. 6, Chap. 373.1 (BNA)	Permitting requirements for hazardous waste facilities.	Applicable	A RCRA Part B Permit, issued by EPA under 40 CFR Parts 270 and 124, does not relieve an owner or operator of the responsibility for obtaining a permit pursuant to this requirement. Facilities that currently have a permit issued pursuant to Part 360 for the management of hazardous waste are deemed to have a valid permit under Part 373.
New York Final Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities	N.Y. COMP. CODES R. & REGS. tit. 6, Chap. IV, Subchapter B, Subpart 373-2 (BNA)	Minimum state standards for the acceptable management of hazardous waste.	Applicable	Owners and operators of facilities that store or treat hazardous waste in waste piles must provide additional information on the permit application as delineated in Section 373.1.5 (e)(1)-(10).
Waste Piles	N.Y. COMP. CODES R. & REGS. tit. 6, § 373-2.12 (BNA)	Requirements for owners and operators of facilities that store or treat hazardous waste in piles.	Applicable	§ 373-2.6 (1)(i) requires that surface impoundment, waste pile, land treatment unit, or landfill that receives hazardous waste after July 26, 1982, must comply with the requirements for detecting, characterizing, and responding to releases to the uppermost aquifer.
New York Interim Status Standards for Owners and Operators of Hazardous Waste Facilities	N.Y. COMP. CODES R. & REGS. tit. 6, Chap. IV, Subchapter B, Subpart 373-3 (BNA)	Establishes minimum statewide standards that define the acceptable management of hazardous waste during the period of interim status and until certification of final closure or, if the facility is subject to post-closure requirements, until post-closure responsibilities.	Applicable	Applicable unless the waste piles are closed and left in place (these shall be treated as Secure Landburial Facilities). Applicable only if state constitutes any interim storage on the site.
New York Rules on Releases, Registration, and Listing of Hazardous Substances	N.Y. COMP. CODES R. & REGS. tit. 6, Part 595 (BNA)	Requirements for the reporting of releases, emergency response, investigation of releases and corrective action.	Applicable	Applies to hazardous substance bulk storage facilities regulated under Part 596.
	N.Y. COMP. CODES R. & REGS. tit. 6, Part 597 (BNA)	Identifies and lists hazardous wastes.	Applicable	Defines reportable quantity (RQ) limits.

Table B-1. (continued)

Standard, Requirement, Criteria, or Limitation	Citation	Description of Requirement	Applicable or Relevant and Appropriate	Comment
New York Water Classifications and Quality Standards	N.Y. COMP. CODES R. & REGS. tit. 6, Part 701 (BNA) N.Y. COMP. CODES R. & REGS. tit. 6, Part 702 (BNA) N.Y. COMP. CODES R. & REGS. tit. 6, Part 703 (BNA)	Lists classifications of surface waters and groundwaters. Sets forth procedures for deriving standards and guidance values for implementing the control of toxic and deleterious substances. Surface water and groundwater quality standards and groundwater effluent standards.	Applicable	Do not violate or exceed the established MCL or specific levels established for principal organic contaminants. Substances belonging to for which there is no specific MCL, the standard or guidance value shall be 5 µg/L or a less stringent value as determined by the Commissioner of the N.Y. State Department of Health.
Implementation of SPDES Program in New York	N.Y. COMP. CODES R. & REGS. tit. 6, §§ 730-738 (BNA) N.Y. COMP. CODES R. & REGS. tit. 6, § 608.4 (BNA)	Regulates permitted releases into waters of the state. Regulates excavation or fill in any of the navigable waters of the state or in adjacent marshes, estuaries, tidal marshes, and wetlands.	Applicable	Substances that do not have an applicable health (water source) standard in Section 703.5 and that the Department determines may pose a threat to human health if discharged into the waters of the state shall be determined by the requirements of Section 702.15. Does not incorporate federal standards.
New York Water Pollution Control Regulations - Use and Protection of Waters	N.Y. ENVTL. CONSERV. LAW art. 24 (BNA)	Regulates the use and development of wetlands.	Applicable	Applicable if the remedial activities for the Colonial site require excavation from or placing fill in any of the navigable waters of the state or in marshes, estuaries, tidal marshes, and wetlands.
NEW YORK FRESHWATER WETLANDS ACT	N.Y. ENVTL. CONSERV. LAW art. 24 (BNA)	Regulates the use and development of wetlands.	Applicable	May be applicable if the remedial alternative involves draining or dredging.
Local Implementation	N.Y. COMP. CODES R. & REGS. § 24-0501 (BNA)	Local freshwater wetlands protection procedures.	Applicable	May be applicable if local jurisdiction have enacted wetlands measures.
NEW YORK ENVIRONMENTAL CONSERVATION LAW - Water Pollution Control	N.Y. ENVTL. CONSERV. LAW art. 17 (BNA)	Do not discard organic or inorganic matter into waters during remedial activities without first obtaining an SPDES permit.	Applicable	Applicable to construction activities during remediation.

Table B-1. (continued)

Standard, Requirement, Criteria, or Limitation	Citation	Description of Requirement	Applicable or Relevant and Appropriate	Comment
Permit for Outlet Point Source and for Disposal System Required	N.Y. ENVTL. CONSERV. LAW § 17-0701 (BNA)	Regulates point sources for the discharge of sewage, industrial waste or other wastes or effluents into the waters of the state of New York.		§ 17-0105.2. "Waters" or "waters of the state" shall be construed to include lakes, bays, sounds, ponds, impounding reservoirs, springs, wells, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Atlantic ocean within the territorial limits of the state of New York and all other bodies of surface or underground water, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters which do not combine or affect a junction with natural surface or underground waters), which are wholly or partially within or border in the state or within its jurisdiction.
NEW YORK ENVIRONMENTAL CONSERVATION LAW - Substances Hazardous or Acutely Hazardous to Public Health, Safety, or the Environment	N.Y. ENVTL. CONSERV. LAW art. 37 (BNA)	Governs the storage or release to the environment of substances hazardous or acutely hazardous to public health, safety, or the environment.	Applicable	
NEW YORK ENVIRONMENTAL CONSERVATION LAW - Enforcement	N.Y. ENVTL. CONSERV. LAW art. 71 (BNA)		Applicable	Violations of the ECL may result in monetary/civil penalties.
NEW YORK ENVIRONMENTAL CONSERVATION LAW - Environmental Regulatory Program Fee	N.Y. ENVTL. CONSERV. LAW Title 4, §§ 72.0401 - 72.0402 (BNA)	Requires annual fees based on the quantity of hazardous waste generated during the year.	Applicable	Would be applicable if site generates any hazardous wastes.
Low-Level Radioactive Waste Manifest System	N.Y. COMP. CODES R. & REGS. tit. 6, § 364.8 (BNA)	Regulates the transport of low-level radioactive waste.	Applicable	Adopts federal standards.
New York Identification and Listing of Hazardous Wastes Regulations	N.Y. COMP. CODES R. & REGS., tit. 6, § 371.1 (BNA)	Establishes the procedures for identifying those solid wastes subject to N.Y. State hazardous waste regulations.	Applicable	Would be applicable if site generates any hazardous wastes.
Criteria for Identifying the Characteristics of Hazardous Waste and for Listing Hazardous Waste	N.Y. COMP. CODES R. & REGS., tit. 6, § 371.2 (BNA)	Classification of Hazardous Waste.	Applicable	Applies to transportation and all other hazardous waste management practices in the State of New York.
New York State Hazardous Waste Manifest System Regulations	N.Y. COMP. CODES R. & REGS., tit. 6, § 372.1 (BNA)	Establishes standards for generators and transporters of hazardous wastes on the manifest system and recordkeeping requirements.	Applicable	All Colony site waste shipments must be properly manifested, in accordance with applicable New York State and federal requirements.
		Regulates hazardous waste transportation manifesting and manifest recordkeeping requirements. Also includes spill response and reporting requirements.	Applicable	Applicable to Transporters.

Table B-1. (continued)

Standard, Requirement, Criteria, or Limitation	Citation	Description of Requirement	Applicable or Relevant and Appropriate	Comment
Shipments by Rail or Water	N.Y. COMP. CODES R. & REGS., tit. 6, § 372.7 (BNA) Appendix 30	Orients shipping documentation requirements for bulk rail and water shipments. Instructions for the Uniform Hazardous Waste Manifest.	Applicable	Applicable if either of these modes is selected for Colonie site waste shipments.
New York Rules on Releases, Registration, and Listing of Hazardous Substances	N.Y. COMP. CODES R. & REGS., tit. 6, § 595.1 (BNA)	Regulates the reporting of releases, emergency response, investigation of releases, and corrective action.	Applicable	Supplements EPA manifest requirements.
New York Water Pollution Control Regulations - Underground Storage Tanks	N.Y. COMP. CODES R. & REGS., tit. 6, §§ 613.5 and 614.5 (BNA)	Regulates testing and monitoring and requires installation of monitoring wells.	Applicable	Applies specifically to hazardous substance bulk storage facilities regulated under Part 596, but may be applicable during loading phase of transportation (in addition to § 372.3).
New York Solid Waste Management Facilities Rules	N.Y. COMP. CODES R. & REGS., tit. 6, Part 360 (BNA)	§ 360-1.1(a) The purpose of this part is to regulate solid waste management facilities, other than hazardous waste management facilities subject to Part 373 or 374 of this Title [6], and facilities managing radioactive (NARM) waste, and low-level radioactive waste subject to Parts 380, 382 and 383 of this Title [6], located wholly within the State of New York.	Applicable	Each division is in the process of establishing its own well construction standards; these criteria are enforceable. Counties have their own rules on well completion reports.

Table B-1. (continued)

Standard, Requirement, Criteria, or Limitation	Citation	Description of Requirement	Applicable or Relevant and Appropriate	Comment
New York State's Solid Waste Management Regulations REGS., tit. 6, Part 360	N.Y. COMP. CODES R. & § 360.1.1(a) The purpose of this part is to regulate solid waste management facilities that are subject to Part 373 or Part 374 of this Title and facilities managing radioactive materials, naturally-occurring and accelerator-produced radioactive (NARM) waste, and low-level radioactive waste that are subject to [Part] Parts 380, 382 and 383 of this Title.	To Be Considered	§ 360-1.2(a)(1) "Solid waste" . . . does not include source, special nuclear or by-product material as defined by the Atomic Energy Act of 1954, as amended (68 Stat. 923) except as may be provided by existing agreements between the State of New York and the government of the United States.	§ 360-1.2(b)(145)152 "Solid waste management facility" means any facility employed beyond the initial solid waste collection process and managing solid waste, including but not limited to: storage areas or facilities; transfer stations; rail-haul or barge-haul facilities; landfills; disposal facilities; solid waste incinerators; refuse-derived fuel processing facilities; pyrolysis facilities; C&D debris processing facilities; [landspreading] land application facilities; composting facilities; surface impoundments . . . and includes all contiguous land and structures, other appurtenances, and improvements on the land used for the proposed management or disposal of solid waste.

Table B-1. (continued)

Standard, Requirement, Criteria, or Limitation	Citation	Description of Requirement	Applicable or Relevant and Appropriate	Comment
New York Hazardous Waste Management System Regulations - General	N.Y. COMP. CODES R. & REGS., tit. 6, Part 370 (BNA)	Provides definitions of terms and general standards applicable to Parts 370 through 374, and 376 of this Title [6].	Applicable	"Solid waste" is any discarded material not excluded under § 371.1(e)(1); § 371.1(e)(1)(iv) states that radioactive materials which are source, special nuclear, or by-product material as defined by the Atomic Energy Act of 1954, are not solid wastes. § 371.1(d) states that a "hazardous waste" is a solid waste that is not excluded under paragraph (e)(2), and exhibits any of the characteristics of hazardous waste identified in section 371.3: ignitability, corrosivity, reactivity, or toxicity; a solid waste that is listed in and not excluded from section 371.4; or a mixture of solid waste and hazardous waste that is listed in section 371.4 solely because it exhibits one or more of the characteristics of hazardous waste identified in section 371.3.
New York Rules for Inactive Hazardous Waste Disposal Sites - Hazardous Waste Disposal Site Remedial Program	N.Y. COMP. CODES R. & REGS., tit. 6 Part 375 (BNA)	Applies to development and implementation of programs under the authority of, inter alia, ECL art. 27, tit. 13. Subpart 375-3 applies specifically to the expenditure of State monies.	Applicable	Incorporates the National Oil and Hazardous Substances Pollution Contingency Plan, 40 CFR Part 300, by reference. Effective 5/30/92.
New York Water Classifications and Quality Standards	N.Y. COMP. CODES R. & REGS., tit. 6, Part 701 (BNA)	Classification of surface waters and groundwaters.	To Be Considered	Consider if remedial action requires obtaining an SPDES Permit.
Ambient Water Quality Standards and Guidance Values (9/90)	NYSDEC Division of Water Technical and Operational Guidance Series (TOGS) 1.1.1	Provides standards/guidance values for ambient concentrations of toxic and nonconventional pollutants in surface and groundwater used by NYSDEC in SPDES permitting.	To Be Considered	Consider if remedial action requires obtaining an SPDES Permit.
Underground Injection/Recirculation - Groundwater Remediation Sites (5/87)	NYSDEC TOGS 2.2.3	Provides guidance to SPDES permitting where groundwater remediation is proposed.	To Be Considered	Consider if remedial action requires obtaining an SPDES Permit.
Primary and Principal Aquifer Determinations (5/87)	NYSDEC TOGS 2.1.3	Provides guidance on determining water supply aquifers in upstate New York.	To Be Considered	

Table B-1. (continued)

Standard, Requirement, Criteria, or Limitation	Citation	Description of Requirement	Applicable or Relevant and Appropriate	Comment
NEW YORK STATE ENVIRONMENTAL CONSERVATION LAW	N.Y. ENVTL. CONSERV. LAW art. 8 (BNA)	Environmental quality review; State version of National Environmental Policy Act	Applicable	§ 8-0111 State and federal reports coordinated. Where an agency (state or local) participates in preparing a statement pursuant to NEPA, compliance with this article shall be coordinated with and made in conjunction with federal requirements in a single environmental reporting procedure. Where the agency does not participate in the preparation of the federal EIS, no further report under this article is required.
New York Environmental Quality Review Regulations	N.Y. COMP. CODES R. & REGS. tit. 6, Part 617 (BNA)	Implements provisions of State Environmental Quality Review Act (SEQR)	Applicable	§ 617.16 Actions involving a federal agency. When draft and final EIS have been prepared under NEPA, an agency shall have no obligation to prepare an additional EIS under this part. Where a finding of no significant impact (FONSI) or other written threshold determination that the action will not require a Federal impact statement has been made under NEPA, that determination does not automatically constitute compliance with SEQRA.
New York Regulations for Prevention and Control of Environmental Pollution from Radioactive Materials	NY Comp Codes R & Regs., tit. 6, Part 380	Establishes standards for protection against ionizing radiation resulting from the disposal and discharge of licensed material to the environment.	Relevant and Appropriate	In the case of an action involving a Federal agency for which either a Federal FONSI or a Federal draft and final EIS have been prepared, except where otherwise required by law, a final decision by a Federal agency shall not be controlling on any State or local agency decision on the action.
New York State Regulations for Low-Level Radioactive Waste Disposal	NY Comp. Codes R. & Regs., tit. 6, Part 382.	Establish requirements for land disposal facilities used for permanent disposal of LLW or naturally occurring and accelerator-produced radioactive material (NARM) waste.	Relevant and Appropriate	DOE contractors and subcontractors are specifically exempt from the provisions of this part at DOE-controlled sites, including the transportation of sources of radiation to and from such sites.
				DOE contractors and subcontractors are specifically exempt from provisions of this part in selecting, characterizing, developing or operating a site to be used by the DOE for disposal of LLW pursuant to Federal law.

Table B-1. (continued)

Standard, Requirement, Criteria, or Limitation	Citation	Description of Requirement	Applicable or Relevant and Appropriate	Comment
New York State Regulations for Low-Level Radioactive Waste Disposal	NY Comp. Codes R. & Regs., tit 6, Part 383.	Establish requirements for design, construction, operation, closure, post-closure monitoring and maintenance, and institutional control of land disposal facilities used for permanent disposal of low-level radioactive waste or NARM waste.	Relevant and Appropriate	Although DOE contractors and subcontractors are exempt from the requirements of this Part to the extent that they are selecting, characterizing, developing, operating, closing or maintaining a site to be used by DOE for permanent disposal of LLW this part may be relevant and appropriate to CISS.

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Table B-2. Potential Location-Specific ARARs for the Remediation of the Colonie Site

Standard, Requirement, Criteria, or Limitation	Citation	Description of Requirement	Applicable or Relevant and Appropriate	Comment
Fish and Wildlife Coordination Act	16 USC §§ 661-668ee (1991, as amended) 40 CFR § 6.302(g) 50 CFR Part 27	Requires consultation when Federal department or agency proposes or authorizes any modification of any stream or other water body, and adequate provision for protection of fish and wildlife resources.	Applicable	Requirement applicable if unnamed stream is diverted.
Endangered Species Act	16 USC §§ 1531-1544 (1991, as amended)	Requires action, including consultation with Department of Interior, to conserve endangered species within critical habitats upon which endangered species depend. Regulates the taking, possession, transportation, sale, purchase, barter, exportation, and importation of wildlife. Lists wildlife species.	Applicable	Site is not in the National Wildlife Refuge System. No endangered species are present on the site, but occasional transients could visit. No critical habitats are present. No taking of wildlife will occur under alternatives proposed.
Clean Water Act (CWA) Dredge or Fill Requirements (§404)	33 USC §§ 1251-1387 (1991, as amended) 40 CFR Parts 230, 231 33 CFR §§ 320-330	Requires permits for discharge of dredged or fill material into waters of the United States, including wetlands.	Applicable	General regulatory policies on permitting Applicable if diversion of stream includes any dredge or fill operations.

Table B-3. Chemical-Specific ARARs for the Remediation of the Colonie Site

Contaminant	Sediment (mg/Kg)	Soil (mg/Kg)	Surface Water ($\mu\text{g/L}$)*	Groundwater ($\mu\text{g/L}$)'
METALS				
Antimony	*	*	-	6
Arsenic	-	*	-	25
Cadmium	*	-	-	10
Copper	-	*	-	200
Lead	*	*	-	25
Manganese	-	-	-	300
Selenium	*	-	-	10
Thallium	*	*	-	-
Uranium	*	35 pCi/L	20 pCi/L	-
Zinc	-	*	-	-
ORGANICS				
Trichloroethene	-	-	-	5
Tetrachloroethene	-	-	-	5

* Except as otherwise noted.
 * These numbers would be from risk assessment (RA).
 - Indicate the chemical was not a constituent of concern in this medium.

Table B-4. Drinking Water Standards for CISS ($\mu\text{g/L}$)

Chemical	New York Water Quality Standard	Federal MCL	Federal Surface Water Quality Criteria	New York Class A Streams Water Quality Criteria				Federal Drinking Water Health Advisories			
				Child, One-Day	Child, Ten-Day	Child, Longer Term	Adult, Longer Term	Lifetime Health Advisory			
INORGANICS											
Antimony	6	6	146	15	15	15	15	15	15	15	3
Arsenic	25	50	.0022	50							
Barium	1,000	2,000	2,000	1,000	1,000						
Boron	1,000										2
Cadmium	10	5	5	10	10	40	40	900	900	3,000	600
Chromium (III)				170,000							
Chromium (VI)					50	50					
Total Chromium	50	100	100	50	50	1,000	1,000	200	200	800	100
Copper	200		1300		200						
Iron	300			300	300						
Iron and Manganese	500										
Lead	25		0	50	50						
Magnesium						35,000					
Manganese	300		200	50	300						
Nickel		100	100	13.4			1,000	1,000	500	1,700	100
Selenium	10	60	60	10	10						

Table B-4. (continued)

Chemical	New York Water Quality Standard	Federal NCL	Federal MCLG	Federal Surface Water Quality Criteria	New York Class A Streams Water Quality Criteria	Federal Drinking Water Health Advisories		
						Child, One-Day	Child, Ten-Day	Adult, Longer Term
Sodium	20,000							
Zinc	300				300	6,000	6,000	
ORGANICS								
trans-1,2-Dichloroethene	5	100	100	700		20,000	2,000	2,000
cis-1,2-Dichloroethene	5	70	70			4,000	3,000	3,000
Polychlorinated biphenyls	.1	.5	0	.000079	.01			11,000
Tetrachloroethene	5	5	0	.8		2,000	1,000	5,000
Toluene	5	1,000	1,000	14,300		20,000	2,000	2,000
Trichloroethene	5	5	0	2.7			7,000	7,000
Vinyl Chloride	2	2	0	2		3,000	3,000	10
								50

Table B-4. (continued)

Chemical	New York Water Quality Standard	Federal MCL	Federal Surface Water Quality Criteria	New York Class A Streams Water Quality Criteria	Federal Drinking Water Health Advisories			
					Child, One-Day	Child, Ten-Day	Child, Longer Term	Adult, Longer Term
RADIONUCLIDES								
beta	1,000 pCi/L ¹	4 mrem	0					
alpha	15 pCi/L ²	15 pCi/L	0					
Radium-226/228	5 pCi/L combined, 3 pCi/L Ra-226	20 pCi/L for either	0					
Radon-222		300 pCi/L	0					
Uranium	5,000 (uranyl ion)	20	30					

¹ Excluding strontium-90 and alpha emitters

² Excluding radon and uranium

Table B-5. Aquatic Water Quality Criteria for CISS ($\mu\text{g}/\text{L}$)

Chemical	Federal Fresh Water Quality Criteria		Federal Human Health Water Quality Criteria	New York Class C Fresh Water Quality Standard	Basis for New York Standard
	Acute	Chronic			
INORGANICS					
Antimony	/p/88	/p/30	45,000		
Arsenic			.0175	190	Propagation
Arsenic (III)	360	190			
Arsenic (V)	*850				
Boron				10,000	Propagation
Cadmium	3.9+	1.1+		1.1+	Propagation
Chromium (III)	1700	210+	3,433,000		
Chromium (VI)	16	11		11	Propagation
Total Chromium				207+	Propagation
Copper	18+	12+		11.8+	Propagation
Iron		1,000		300	Propagation
Lead	82+	3.2+		3.2	Propagation
Manganese			100		
Nickel	1,400+	160+	100	95+	Propagation
Selenium	20	5		1	Propagation
Zinc	120+	110+		30	Propagation
ORGANICS					
Dichloroethylenes	*11,600				
Polychlorinated biphenyls	2	.014	.000079	.001	Accumulation
Tetrachloroethylene	*5,280	*840	8.85		
Toluene	*17,500		424,000		
Trichloroethylene	*45,000	*21,900	80.7		
Vinyl Chloride			525		

+ = Hardness dependent criteria (100 mg/L CaCO₃ used)

* = Insufficient data to develop criteria. Value presented is the lowest observed effect level.

/p/ = Proposed criterion